



Rocky Flats Environmental Technology Site

RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR) SUPPLEMENT

TYPE 1 AND TYPE 2 FACILITIES

BUILDING 771 CLOSURE PROJECT

REVISION 1

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| C | SURVEY UNIT 771003 DATA |
| D | SURVEY UNIT 771004 DATA |
| E | SURVEY UNIT 771005 DATA |
| F | SURVEY UNIT 771006 DATA |
| G | SURVEY UNIT 771007 DATA |
| H | SURVEY UNIT 771008 DATA |
| I | SURVEY UNIT 771009 DATA |
| J | SURVEY UNIT 771010 DATA |
| K | SURVEY UNIT 771011 DATA |
| L | SURVEY UNIT 771012 DATA |
| M | SURVEY UNIT 771013 DATA |
| N | SURVEY UNIT 771014 DATA |
| O | SURVEY UNIT 771015 DATA |
| P | SURVEY UNIT 771016 DATA |
| Q | SURVEY UNIT 771017 DATA |
| R | SURVEY UNIT 771018 DATA |
| S | SURVEY UNIT 771019 DATA |
| T | SURVEY UNIT 771020 DATA |
| U | SURVEY UNIT 771023 DATA |
| V | SURVEY UNIT 771024 DATA |
| W | SURVEY UNIT 771025 DATA |
| X | SURVEY UNIT 771026 DATA |
| Y | SURVEY UNIT 771027 DATA |
| Z | SURVEY UNIT 771030 DATA |
| AA | SURVEY UNIT MAPS |
| AB | Po-210 INVESTIGATION DATA |
| AC | MINIMUM DETECTABLE CONCENTRATION (MDC) CALCULATIONS |
| AD | SURVEY UNIT 771035 DATA |
| AE | SURVEY UNIT 771036 DATA |
| AF | SURVEY UNIT 771037 DATA |

ABBREVIATIONS/ACRONYMS

| | |
|---------------------|---|
| ACM | Asbestos containing material |
| Am | Americium |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CDPHE | Colorado Department of Public Health and the Environment |
| DCGL _{EMC} | Derived Concentration Guideline Level - elevated measurement comparison |
| DCGL _w | Derived Concentration Guideline Level - Wilcoxon Rank Sum Test |
| D&D | Decontamination and Decommissioning |
| DDCP | Decontamination and Decommissioning Characterization Protocol |
| DOE | U.S. Department of Energy |
| DPP | Decommissioning Program Plan |
| DQA | Data quality assessment |
| DQOs | Data quality objectives |
| EPA | U.S. Environmental Protection Agency |
| FDPM | Facility Disposition Program Manual |
| HF | Hydrogen fluoride |
| HVAC | Heating, ventilation, air conditioning |
| IHSS | Individual Hazardous Substance Site |
| IWCP | Integrated Work Control Package |
| K-H | Kaiser-Hill |
| LBP | Lead-based paint |
| LCS | Laboratory control samples |
| LSDW | Life safety disaster warning |
| MARSSIM | Multi-Agency Radiation Survey and Site Investigation Manual |
| MDA | Minimum detectable activity |
| MDC | Minimum detectable concentration |
| NORM | Naturally occurring radioactive material |
| NRA | Non-Rad-Added Verification |
| OASIS | Oxford Alpha Spectroscopy Integrated System |
| OSHA | Occupational Safety and Health Administration |
| PARCC | Precision, accuracy, representativeness, comparability and completeness |
| PCBs | Polychlorinated biphenyls |
| PDS | Pre-demolition survey |
| PDSP | Pre-Demolition Survey Plan |
| Po | Polonium |
| Pu | Plutonium |
| QC | Quality Control |
| RCRA | Resource Conservation and Recovery Act |
| RFCA | Rocky Flats Cleanup Agreement |
| RFETS | Rocky Flats Environmental Technology Site |
| RLC | Reconnaissance Level Characterization |
| RLCR | Reconnaissance Level Characterization Report |

| | |
|-------|---------------------------------|
| RSP | Radiological Safety Practices |
| SVOCs | Semi-volatile organic compounds |
| TBD | Technical basis document |
| TSA | Total surface activity |
| UBC | Under Building Contamination |
| V&V | Verification and validation |
| VOCs | Volatile organic compounds |

EXECUTIVE SUMMARY

A Reconnaissance Level Characterization (RLC) was performed to characterize 771 Closure Project facilities that were believed to be Type 1 and Type 2 facilities. These facilities had not been fully characterized in the original Building 771/774 Reconnaissance Level Characterization Report (RLCR), dated August 8, 1998. The original RLCR focused on B771 and B774. Based upon our results, Trailers T771A - C, E - H, J - L, M, Q, R, T, MB, DT and T773S, Buildings 714A, B715-717, B772, B772A, B773, S770, B771B and K771N, and exterior Tanks 21A, 173, 174, 179, 180, 185, 192, 193, and 197 are considered Type 1 Facilities. The 771 Exhaust Tunnel and Stack, Buildings 714, 728, 770, 771C and 775, and exterior Tanks 176, 182-184, 185, 194, 195, 292, 293 and 774A & B are considered Type 2 Facilities. Even though the exhaust tunnel and stack are considered to be Type 2 facilities, they will be decommissioned as Type 3 facilities, along with B771, in accordance with the 771 Closure Project Decommissioning Operations Plan. Environmental media beneath and surrounding the facilities were not within the scope of this characterization.

Physical, chemical and radiological hazards were assessed based on historical reviews, process knowledge, and newly acquired RLC data. The RLC encompassed both radiological and chemical characterization to enable compliant disposition and waste management. Because some of the facilities were initially classified as Class 3 (RFCA Type 1) facilities, the RLC implemented a Pre-Demolition (Final Status) Survey design for all potential Class 3 facilities to determine whether the facilities can be released (off the site) without restrictions, pursuant to the D&D Characterization Protocol (MAN-077-DDCP).

The RLC confirmed that most of the facilities (inside and outside) do not contain radiological contamination above the release limits prescribed in DOE Order 5400.5 and the RFETS Radiological Control Manual. Radiological contamination was found in one area within B771C and in the B771 stack. There is also potential for radiological contamination in both lift stations (i.e., B728 and B775), and on/in Tanks 182 - 184, 292 and 293, and 774A and 774B. Verification surveys will be conducted on concrete slabs after tanks and other structures (e.g., B716 and B771B) have been removed and before the slabs are removed. Pre-release evaluations also will be conducted on tanks and other equipment prior to their removal (e.g., the tank under B775). In addition, the bottom of the B772A pit will be surveyed after the standing water has been removed. The water and any sediment will also be characterized. Type 2 facilities will be investigated further during In-Process and Pre-Demolition Characterization.

Some chemical hazards are present. B714, and Tanks 176, 185, 194 and 195 may possess residual chemical contamination. Also, PCBs are present in some of the fluorescent light ballasts and could be present in paints. Paint samples from B771C and the exhaust tunnel are currently being analyzed for PCBs. All demolition debris and PCB light ballasts will be managed in compliance with regulations governing PCBs (40 CFR 761), in accordance with the Decommissioning Program Plan, Section 3.3.5, as applicable. In

addition, facilities contain asbestos in both friable and non-friable forms. Furthermore, lead could be present in incandescent lamps, and mercury could be present in fluorescent lamps. Asbestos containing material, and any lead- or mercury-containing lamps will be removed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations.

Sampling for lead in paint was not required. Environmental Waste Compliance Guidance #27, *Lead-Based Paint (LBP)* and *Lead-Based Paint Debris Disposal*, states that LBP debris generated outside of currently identified high contamination areas shall be managed as non-hazardous (solid) wastes, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal.

Some of the 52 facilities (e.g., foundations and the bottom of slabs below grade) could be impacted (contaminated) by Individual Hazardous Waste Sites (IHSSs) and Under Building Contamination (UBC). Impacts will be defined during future investigation of the UBC and IHSSs, in-process characterization and the Pre-Demolition Survey, and/or characterization of demolition debris when building slabs and trailer supports are removed.

Physical hazards associated with the facilities consist of those common to standard industrial environments, and include hazards associated with energized systems, utilities, compressed gas, diesel fuel, and trips and falls. There are no unique hazards associated with the different facilities. The buildings have been relatively well maintained and are in good physical condition, and therefore, do not present hazards associated with building deterioration.

Based upon this RLC, the facilities were classified pursuant to the Decommissioning Program Plan, subject to concurrence by the Colorado Department of Public Health and the Environment (refer to Table ES-1). Thirty five of the facilities are considered Type 1 facilities and can be disposed of as sanitary waste/construction debris (except for the PCB Bulk Product Waste, ACM, and lamps with lead and mercury). Seventeen of the facilities are considered Type 2 facilities. Facility types, as defined in the Decommissioning Program Plan, are defined as follows:

- Type 1** facilities are considered "free of contamination"
- Type 2** facilities contain no significant contamination or hazards, but are in need of decontamination
- Type 3** facilities contain significant radiological contamination and/or hazards

To ensure that the Type 1 facilities remain free of contamination and that Pre-Demolition Survey data remain valid, isolation controls will be established and implemented pursuant to PRO-475-RSP-16 01, and the Type 1 facilities will be posted accordingly. Surveys also will be conducted prior to removal.

Table ES-1 Facility Hazards and Classification, 771 Closure Project Type 1 & Type 2 Facilities

| Facility | Chemical Hazards | Location | Radiological Hazards | Location | Building Classification ¹ |
|---|-----------------------------------|--|---|---------------------------------------|---|
| B771C | Asbestos | Rms 301 to 309 | One elevated paint sample (~150 dpm/100 cm ²) | Room 303 floor | Type 2 |
| 771 Exhaust Tunnel & Stack | None | NA ² | Low levels of elevated activity identified (ranging from 0.3 to 621 pCi/g) Additional sampling will be performed prior to D&D to define depth and height of elevated activity | Interior stack surface below ~20 feet | Type 2 (to be decommissioned as a Type 3 per the DOP) |
| T771A - C, E - H, J - L, MB, Q, R, T & DT | Asbestos | T771 A & C | None | NA ² | Type 1 |
| T771M | None | NA ² | None | NA ² | Type 1 |
| T773S | None | NA ² | None | NA ² | Type 1 |
| B714 | Asbestos Potential HF residues | Exterior walls & roof Interior | None | NA ² | Type 2 |
| 714A | None | NA ² | None | NA ² | Type 1 |
| B715 & 716 | Asbestos Diesel (product) | B715 Both tanks | None | NA ² | Type 1 |
| B717 | None | NA ² | None | NA ² | Type 1 |
| B728 | None | NA ² | Potential contamination | Interior | Type 2 |
| B770 | None | NA ² | Am-241 | Exterior wall & roof | Type 2 |
| S770 & B771B | Asbestos | B771B wiring | None | NA ² | Type 1 |
| K771N | None | NA ² | None | NA ² | Type 1 |
| B772 | None | NA ² | None | NA ² | Type 1 |
| B772A | None | NA ² | None | NA ² | Type 1 |
| B773 | Asbestos | Wiring and roof | None | NA ² | Type 1 |
| B775 | None | NA ² | Potential contamination | Interior & tank system | Type 2 |
| TK173, 179 & 197 | Propane (product) Asbestos | All tanks TK 197 manifold station | None | NA ² | Type 1 |
| TK174 | None | NA ² | None | NA ² | Type 1 |
| TK176 | Potential NaOH residue | Interior | None | NA ² | Type 2 |
| TK180 | Asbestos | Flanges | None | NA ² | Type 1 |
| TK182 - 184 | None | NA ² | Potential contamination | All 3 tanks | Type 2 |
| TK185 | Potential KOH residue | Interior | None | NA ² | Type 2 |
| TK192 & 193 | None | NA ² | None | NA ² | Type 1 |
| TK21a | Diesel (product) | Interior | None | NA ² | Type 1 |
| TK194 & 195 | Potential HF residues | Interior | None | NA ² | Type 2 |
| TK 292 & 293 | None | NA ² | Potential contamination | Both tanks | Type 2 |
| TK774A & 774B | Asbestos | Piping, fittings, reductions & flanges | Potential contamination | Both tanks | Type 2 |

¹ Building classification does not include environmental media beneath or adjacent to the facility foundation/slab

² Not Applicable

PCBs are present in some of the fluorescent light ballasts and may be present in paints. Also, lead could be present in incandescent lamps, and mercury could be present in fluorescent lamps. The presence of PCBs in light ballasts and paint, the presence of asbestos, and/or the presence lead and mercury in lamps do not make a facility a Type 2 as long as PCB bulk product waste, asbestos-containing material, and lead- and mercury-containing lamps are removed pursuant to Site asbestos abatement and waste management procedures

1.0 INTRODUCTION

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed. Among these are the 771 Closure Project facilities addressed in this Reconnaissance Level Characterization Report (RLCR) Supplement, including B771C, the 771 exhaust tunnel and stack, all of the trailers (T771 A - C, E - H, J - M, Q, R, T & MB, T771-DT, and T773S), all of the outbuildings (B714, B714A, B715 - B717, B728, B770, B772, B772A, B773, B775, S770, B771B and K771N), and all of the exterior tanks (Tanks 21A, 173, 174, 176, 179, 180, 182 - 185, 192 - 195, 197, 292, 293, 774A and 774B) (i.e., 52 facilities and tanks in total). These facilities had not been fully characterized in the original Building 771/774 RLCR, dated August 8, 1998. They were believed to be Type 1 and Type 2 facilities. They are listed in Table 1-1 and highlighted in Exhibit 1-1. These facilities no longer support the RFETS mission and need to be removed to reduce Site infrastructure, risks and/or operating costs.

Before the facilities can be removed, hazards must be identified. Hazards identified will be used to release some of the facilities and to dispose of others in a compliant manner. This document presents the existing physical, radiological and chemical hazards associated with the facilities, and classifies the facilities pursuant to the RFETS Decommissioning Program Plan (DPP, K-H, 1999). The hazards assessment is based on facility history and process knowledge, operating and spill records, and results of the reconnaissance level characterization (RLC). The RLC was conducted pursuant to the RFETS Decontamination and Decommissioning Characterization Protocol (DDCP; K-H 1999). The content and outline of this RLCR Supplement are consistent with the Kaiser-Hill (K-H) Facility Disposition Program Manual (FDPM, K-H, 1998).

Purpose

The purpose of this report is to communicate and document the results of the RLC effort. The purpose includes summarizing the data into a concise, usable format and interpreting the data for use in management decisions, primarily

- Definition of individual hazards and overall risk associated with facility decontamination and decommissioning (D&D),
- Typing of facilities based on hazards identified,
- Ability to release facilities from the Site, and
- Waste classification to enable compliant disposal

Scope

This report covers physical, radiological and chemical characterization of the 52 facilities listed in Table 1-1. Based on the hazards identified, the facilities were typed and assessed against unrestricted release and waste disposal criteria. Environmental media beneath and surrounding the facilities are not within the scope of this characterization. However, Under Building Contamination (UBC) and Individual Hazardous Substance Sites (IHSSs)

could have contaminated the below-grade portions of some facilities (e.g., foundations and slabs). Impacts will be defined during future investigation of the UBC and IHSSs, in-process characterization and the Pre-Demolition Survey, and/or characterization of demolition debris when building slabs and trailer supports are removed. Both facilities and environmental media will be dispositioned pursuant to the Rocky Flats Cleanup Agreement (RFCA).

Table 1-1 List of the 771 Closure Project Type 1 and Type 2 Facilities

| Facility Number | Facility Description |
|---------------------------------------|---|
| B771C | Drum Storage, Counting and Shipping Facility |
| 771 Stack | Exhaust Tunnel & Stack |
| T771A – C, E – H, J, K, MB, Q, R & DT | Office, Locker, Shower and Break-Room Trailers |
| T771L | Rest Room Trailer |
| T771M | Modular Network Operations Center |
| T771T | Office Trailer; was T881A; characterized as part of Group B RLC |
| T773S | Skid Mounted Guard Post |
| B714 & B714A | Hydrofluoric (HF) Storage |
| B715 & B716 | Emergency Generators |
| B717 | B771 Sampling Shed |
| B728 | Process Waste Pit |
| B770 | Office and Supply Building |
| S770 | Carpenter Storage Shed |
| B771B | Carpenter Shop |
| K771N | Food Bldg, SW of B773 |
| B772 | New Site Breathing Air Facility |
| B772A | HF Acid Pit S of B772 |
| B773 | Old 771 Guard Post |
| B775 | Sanitary Lift Station |
| Tanks 173, 179 & 197 (aka 207) | Propane Storage E of T771B, SE of T771G and SE of 774 |
| Tank 174 | Liquid Argon Storage N of B771C |
| Tank 176 | Sodium Hydroxide (NaOH) Storage N of B774 |
| Tank 180 | Cooling Water Storage On B774 near Cooling Tower |
| Tanks 182 – 184 | Neutralized Waste Storage SE of B774 |
| Tank 185 | Potassium Hydroxide (KOH) Storage SE of B714 |
| Tanks 192 & 193 | Diesel Underground Storage Tanks S of 771 – empty |
| Tank 21a | Diesel Aboveground Storage Tank SE of B715 |
| Tanks 194 & 195 | Hydrofluoric Acid Storage E of B714 |
| Tanks 292 & 293 | Fire Water USTs adjacent to B728 |
| Tanks 774A & 774B | Steam Condensate Storage NW of B774 |

2.0 OPERATING HISTORY AND PHYSICAL DESCRIPTION

2.1 B771C

Building 771C, the B771 annex, was constructed in 1972 and occupies the space between B771 and B774. It is attached to and accessible to both buildings. It was used as a drum counting and shipping facility. Drums were transported into the building, counted, put in storage, and transferred to B664 for shipment to an off-site facility. There are two drum counter below the floor and one above the floor on a platform. Drums coming from Building 774 had to be lowered to the floor of the annex by a lift, as the floor of B774 is three feet higher. Presently there are no drums being stored in the facility.

2.1.1 General Construction and Foundation

B771C is a one-story building with two mezzanines. The foundation walls extend above ground level to the height of the B771 floor. The space between the walls was back filled, and a six-inch reinforced concrete floor was poured. The exterior framing consists of reinforced concrete columns and a poured reinforced concrete top outside wall beam on the north and south sides of the annex. The space between the floor, columns and the beam is filled in with concrete blocks that are reinforced at intervals. During security upgrades the area in front of the original dock door was extended, and a security cage was built on top of it to enclose the dock and the north emergency exit. Construction of the mezzanines consists of steel support columns and steel framework covered with steel decking.

2.1.2 Roof

The reinforced top concrete wall beam is built in the shape of an L to support the roof, which is a prestressed, reinforced concrete, twin-tee construction. Roof finishing consists of lightweight concrete, insulation, and asphalt and gravel on top.

2.1.3 Walls

Interior walls are of concrete block construction dividing the annex into five rooms. A sixth room is the airlock to the emergency exit on the north side of the building.

2.1.4 Ceilings

There is no suspended ceiling in the annex. The ceiling is the underside of the twin-tee roof, which has been painted for ease of decontamination in case of a contamination incident.

2.1.5 Heating, Ventilation, and Air Conditioning (HVAC)

The HVAC equipment is located on two mezzanines in the annex. One supports the supply system, and the other supports the exhaust filter plenum. The supply and exhaust fans are located on the roof. There are two fans on each system.

This facility was to be maintained as a contamination-free area, and as such the building was maintained at a higher pressure than B771 such that the air-flow was from the Annex to Corridor G, which has double airlocks leading into the production areas. All drums coming to the facility were monitored for contamination and decontaminated if necessary.

2.1.6 Utilities

Electric and emergency power come from the B771 systems. The Annex has its own fire protection system (System D), which taps off the domestic water ring that goes around B771 and B774. An Uninterruptible Power Supply is in the Annex to supply power to the HVAC controls during loss of power. The Life Safety/ Disaster Warning System is connected to the B771 system. Compressed air that is used to extend and retract the shielded lids on the under-the-floor counting systems comes from Building 771.

2.2 771 Exhaust Tunnel and Stack

The tunnel and stack provide the path for all air exhausted from B771 via the main building exhaust filter plenums. The tunnel consists of approximately 100 feet of horizontal steel reinforced concrete ductwork connecting the B771 Main Filter Plenum to the base of the 175-foot stack. The Main Filter Plenum connection to the tunnel is fabricated from sheet metal. The stack was constructed in place from steel reinforced concrete. It has an outside diameter of approximately 18 feet at the base and approximately 10 feet at the top. A small piece of concrete is missing from the top of the stack rim, possibly caused by over pressurization during the 1957 B771 Fire. The stack has two 3-inch holes on the east and west sides at approximately 6-foot elevation, probably for effluent sampling and inspection. The stack also has 8 pipe flanged/blanked ports, 4 at approximately 20-foot elevation and 4 at approximately 40-foot elevation. It is assumed that these 8 ports historically were used for sampling and/or inspection.

2.3 Trailer T771A, Offices

This modular office building was acquired and installed northeast of Building 771 in 1975. The trailer is approximately 24 feet wide x 60 feet long x 11 feet high with approximately 1440 square feet of office space. There are two doors leading into this office building, one on the east side and one on the west side. Both entry doors are covered with a wood structure approximately 4 feet wide x 8 feet long x 12 feet high with 4 feet wide x 20 feet long wood ramps leading to each door. The siding and the skirting around the bottom of the trailer, which is approximately 40" high, are constructed from corrugated aluminum. This facility has a metal roof over roof insulation. The tie-down

method for the trailer was unknown, because the trailer skirting covered the footing/foundation. Structurally the facility is sound both inside and outside.

The facility's interior outside walls are wood paneling over insulation. The interior partition walls are drywall on stud framing, and the floor is carpet on wood flooring. The trailer has two hard-wall rooms, one at each end of the unit. The ceiling is a drop-ceiling type with acoustical tile. The utilities for this trailer consist of an electric heat pump, which is used for both heating and air conditioning. The trailer is connected to the Site Smoke Detection and Alarm System and the Plant Public Address System.

T771A is currently in use and has always been used as an office facility. Radioactive materials and chemicals have never been used or stored in this office facility.

2.4 Trailer T771B, Offices

This trailer was acquired and installed northeast of Building 771 in 1975. The size of this trailer is approximately 24 feet wide x 60 feet long x 9 feet high with approximately 1440 square feet of office space. There are two doors leading into this trailer, both of them on the south side. Both entry doors are covered with a wood structure approximately 4 feet wide x 4 feet long x 8 feet high with wood ramps leading to the entry doors, approximately 4 feet wide x 6 feet long. The siding and the skirting around the bottom of the trailer, which is approximately 40 inches high, is enamel on aluminum. This facility has a metal roof over roof insulation. The tie-down method for the trailer is unknown, because the trailer skirting covered the footing/foundation. Structurally the facility is sound both inside and outside.

The facility's interior outside walls are wood paneling over insulation, the interior partition walls are wood paneling on stud framing, and the floor is carpet on wood flooring. The trailer has two hard wall rooms, which are constructed using drywall and metal stud walls, one at each end of the unit. The ceiling is drop-ceiling type with acoustical tile. The utilities for this trailer consist of a propane heat pump, which is used for both heating and air conditioning. The trailer is connected to the Site Smoke Detection and Alarm System and the Plant Public Address System.

T771B is currently in use and has always been used as an office facility. Radioactive materials and chemicals have never been used or stored in this office facility.

2.5 Trailer T771C, Locker and Shower Facility

This trailer was acquired and installed northeast corner of Building 771 in June of 1983. The size of this trailer is approximately 10 feet wide x 50 feet long x 8 feet high. The facility contains approximately 520 square feet of floor space. There are three doors leading into this trailer, one is on the east side, and two are on the north side. The east side entry has 5 wood steps with handrails. The north two entry doors are covered with a wood structure approximately 4 feet wide x 4 feet long x 12 feet high with 4-6 wood steps, and the west end has a wood dock area. The siding and the skirting around the bottom of the trailer, which is approximately 28 inches high, is enamel on aluminum.

This facility has a metal roof over insulation. The tie-down method for the trailer is unknown, because the trailer skirting covers the footing/foundation. The trailer's interior outside walls are wood paneling over insulation, the interior partition walls are wood paneling on stud framing, and the floor is carpet on wood flooring. The ceiling is drop-ceiling type with acoustical tile. Structurally the trailer is sound both inside and outside.

The trailer is currently in use and has always been used as a locker and shower room. The utilities for this trailer consist of electricity, an electric heater, domestic water, and an electric hot water heater. The facility is hooked up to the Building 771 sewer system to support the shower facilities, as well as the fire sprinkler system and the alarm system. Radioactive materials and chemicals have never been used or stored in this facility.

2.6 Trailer T771E, Offices

T771E was acquired and installed northwest of Building 773 in 1985. In 1993 T771H was moved in and attached to the north side of T771E. The size of T771E is approximately 29 feet wide x 60 feet long x 11 feet 4 inches high with approximately 1440 square feet of office space. There are four doors leading into this trailer, three of them on the south side and one on the east side of the trailer. All of the entry doors are covered with a wood structure approximately 4 feet wide x long 4 feet x 8 feet high. The entry doors have wood steps leading up to them, which are approximately 4 feet wide x 6 long. The siding and the skirting around the bottom of the trailer, which is approximately 40 high, is enamel on aluminum. This office facility has a metal roof over roof insulation. Structurally the facility is sound both inside and outside. The tie-down method for the trailer is unknown, because the trailer skirting covered the footing/foundation.

The facility's interior outside walls are wood paneling over insulation, the interior partition walls are wood paneling on stud framing, and the floor is carpet on wood flooring. The trailer has six hard-wall office rooms. The ceiling is drop-ceiling type with acoustical tile. The utilities for this trailer consist of an electric heat pump, which was used for both heating and air conditioning.

T771E is currently in use and has always been used as an office facility. Radioactive materials and chemicals have never been used or stored in this office facility.

2.7 Trailer 771F, Offices

This trailer was constructed/assembled in 1985 at its present location, directly west of the Building 771 old Guard Post, Building 773. T-771F is approximately 28 feet wide x 70 feet long x 11 feet high for approximately 1960 square feet, and it is assembled from 2 trailer units of approximately 14 feet wide x 70 feet long feet in size. There are two doors leading into this trailer, which are located on the south side of the trailer. The entry doors are covered and are approximately 4 feet wide x 4 feet long x 10 feet high. The office trailer is covered with a corrugated metal siding. The skirting around the bottom of the trailer, which is approximately 28 inches high, is enameled metal. This office facility has a metal roof over roof insulation. Structurally the trailer is sound both inside and outside.

The facility's interior outside walls are wood paneling over insulation, the interior partition walls are wood paneling on stud framing, and the floor is carpet on wood flooring. The trailer has six hard-wall office rooms. The ceiling is drop-ceiling type with acoustical tile. The utilities for this trailer consist of an electric heat pump, which was used for both heating and air conditioning.

Trailer T771F is currently in use and has always been used as an office facility. Radioactive materials and chemicals have never been used or stored in this office facility.

2.8 Trailer T771G, Locker and Shower Facility

This trailer was placed in service in 1985 at its present location, which is approximately 100 feet north of Building 774. The facility has been a locker and shower facility since then, although its prior history is unknown. The size of the trailer is approximately 9 feet wide x 66 feet long x 11 feet high with approximately 1200 square feet of space, which includes the wood constructed dock and door entryways. There are two entry doors with wood steps, both on the south side. The unit siding is baked on painted sheet metal. Some of the skirting at the bottom of the north side the trailer has been removed. There are two windows in the south wall, one window in the east wall, and four windows in the north wall. This facility has a metal roof over roof insulation.

The facility is currently in use. It has a propane hot-water heater and a propane heating furnace. Other utilities for T771G include two exterior wall mounted swamp coolers for cooling the facility during the summer months. Propane Tank 179, which is located south east of T771G, supplies all of the propane gas needs to heat the facility and provide hot water for the showers. The facility has a fire sprinkler system and alarm system, and is connected to the Plant Public Address System.

2.9 Trailer T771H, Offices

This trailer was placed on site in 1993. T771H was installed directly north of T771E and it was attached to the north wall of T771E. Trailers T771H/E are located approximately 150 feet northwest of Building 773, the old Building 771 Guard Post. The size of this office trailer is approximately 28 feet wide x 60 feet long x 10 feet high. Office Trailer T771H has approximately 1848 square feet of office space. The entry doors are covered and are approximately 4 feet wide x 4 feet long x 10 feet high. The office trailer is covered with a corrugated metal siding. This office facility has metal roofing over insulation. This facility has corrugated plastic skirting all around the base. The facility's interior-outside walls are wood paneling over insulation, the interior partition walls are wood paneling on stud framing, and the floor is carpet on wood flooring. The trailer has six hard wall office rooms. The ceiling is drop-ceiling type with acoustical tile. Structurally the trailer is sound both inside and outside.

T771H is currently used as an office facility and has always been used as an office facility. The utilities for this trailer consist of electric heat pumps, which are used for both

heating and air conditioning. Radioactive materials and chemicals have never been used or stored in this office facility.

2.10 Trailer T771J, Offices

This trailer was constructed/assembled in 1984 at its present location, which is approximately 200 feet directly west of the Building 771 old Guard Post, Building 773. The size of this trailer is approximately 28 feet wide x 60 feet long x 11 feet high for 1960 square feet, and it is assembled from 2 trailer units of approximately 14 feet x 60 feet in size. There are two doors leading into this trailer, which are located on the north side of the trailer. The entry doors are covered and are approximately 4 feet wide x 4 feet long x 10 feet high. The office trailer is covered with a corrugated metal siding. The skirting around the bottom of the trailer, which is approximately 28 inches high, is enameled metal. Structurally the trailer is sound both inside and outside.

The facility's interior outside walls are wood paneling over insulation, the interior partition walls are wood paneling on stud framing, and the floor is carpet on wood flooring. On the inside of the unit there are two hard-wall offices. One is located in the south east corner and is approximately 12 feet wide x 15 feet long, and the other hard-wall office is located in the north east corner of the trailer and is approximately 8 feet wide x 10 feet long. The ceiling is drop-ceiling type with acoustical tile.

Trailer T771J is currently in use as an office facility and has always been used as an office facility. The utilities for this trailer consists of two electric heaters/air-conditioners located outside on the west wall. There are 12 surface-mounted two-tube fluorescent ceiling lights, and many duplex outlets in the perimeter walls. The trailer is connected to a smoke detection system, alarmed locally, and the Plant Public Address System. Radioactive materials and chemicals have never been used or stored in this office facility.

2.11 Trailer T771K, Offices

This trailer was constructed/assembled in 1984 at its present location, which is approximately 200 feet directly west of the Building 771 old Guard Post, Building 773. The size of this trailer is approximately 28 feet x 70 feet x 11 feet high for approximately 1960 square feet of floor space. This trailer is assembled from 2 trailer units of approximately 14 feet x 70 feet in size. There are two doors leading into this trailer, which are located on the north side of the trailer. The entry doors are covered and are approximately 4 feet x 4 feet x 10 feet high with wood steps up to the door entry. The office trailer is covered with a corrugated metal siding. The skirting around the bottom of the trailer, which is approximately 28 inches high, is enameled metal. Structurally the trailer is sound both inside and outside.

The facility's interior outside walls are wood paneling over insulation, and the interior partition walls are wood paneling on stud framing. There are two hard-wall offices. One is located in the south west corner and is approximately 12 feet wide x 15 feet long, and the other is located on the north wall, approximately in the center of the wall, and is

approximately 8 feet wide x 10 feet long. The interior perimeter walls consist of wood panel boards, 1/4-inch thick, over insulation. The two office walls are constructed out of gypsum wallboard material. The ceiling is a drop ceiling with acoustical tile and boards that span the short width of the trailer, held in place with 1" wide wood strips. This unit has carpeted floor covering over plywood.

This trailer is currently in use as an office trailer facility and has always been used as an office trailer. The utilities for this trailer consist of two electric heaters/air-conditioner units located outside on the north wall. The trailer has a smoke detection system, alarmed locally, and is connected to the Plant Public Address System. There are 12 surface-mounted, two-tube fluorescent ceiling lights and many duplex outlets in the perimeter walls. Radioactive materials and chemicals have never been used or stored in this office facility.

2.12 Trailer T771L, Rest Room Facility

Trailer T771L was placed on site in 1987 as a rest room facility. It is located approximately 30 feet directly east of T771J. The facility is prefabricated and modular. The facility is approximately 10 feet wide x 32 feet long x 10 feet high, for approximately 320 square feet of space. The unit siding is baked on painted sheet metal. The facility has a 28-inch metal skirt around the foundation. T771L has a metal roof over roof insulation. There are two entries, both on the north side. There are steps up from grade.

The facility houses both men's and women's rest room facilities with hot and cold running water. The utilities for this trailer include electric heat, an electric hot water heater, and fluorescent lighting. The facility has a sewage lift-station associated with it. T771L has always been used as a rest room facility. Radioactive materials and chemicals have never been used or stored in this facility, however, rest room cleaning chemicals are routinely used to clean the facility.

2.13 T771M, Modular Network Operations Center Facility

T771M was placed on site in 2000. It is located directly west of T771K near the north end of the trailer. This facility is approximately 8 feet wide x 14 feet long x 9 feet high for approximately 112 square feet of floor space. The facility houses the Network Operations Center (NOC), which is a portable telecommunications unit. This facility was installed to provide additional network capability for the offices, computers and telephones that will be installed in the additional office trailers that have been installed in the Building 771 complex. There is one entry door on the north side of the facility. There are no steps up from grade. The unit's exterior siding is a pre-fabricated construction panel, which contains pea-sized gravel embedded into the surface of the construction panels. T771M has a slightly peaked metal-covered roof.

There are no occupants in the facility, it contains only telecommunications equipment. Utilities for this facility include electricity and a heat pump for heating and air.

conditioning Radioactive materials and chemicals were never used or stored in this office facility

2.14 Trailer T771MB, Office and Break Room Facility

Trailer T771MB contains one office and one break room/conference room. This trailer was placed in the Building 771 complex in September 1999. The facility is located approximately 60 feet northwest of T773S, the temporary skid-mounted guard post for the Building 771 Cluster Facilities. The size of the trailer is approximately 12 feet wide x 24 feet long x 10 feet high with approximately 480 square feet of floor space. T771MB has only one entry door, which is located on the south side. There are four steps up from grade with wooden handrails, and the entry door has a 4 feet wide x 6 feet long x 8 feet high plywood cover. The unit siding is baked on painted sheet metal. All of the skirting at the bottom of the trailer has been removed. The trailer has corrugated metal siding over insulation. The roof is corrugated metal sloped for drainage.

T77MB is currently being used as an office and break room facility, and has always been used as such. The utilities for T-771MB consist of electricity and an electric heat pump, which is used for both heating and air conditioning. The trailer is hooked up to the Plant Smoke Detection System and the Plant Public Address System. Radioactive materials and chemicals were never used or stored in this office facility.

2.15 Trailer T771Q, Offices

This office trailer was moved to its current location during the spring of 2000. This facility was formerly T883C. The size of this trailer is approximately 28 feet wide x 70 feet long x 11 feet high for approximately 1960 square feet of floor space. The office trailer is assembled from 2 trailer units of approximately 14 feet wide x 70 feet long. There are two doors leading into this trailer, which are located on the north side of the trailer. The entry doors are covered and are approximately 4 feet x 4 feet x 10 feet high. The exterior of this office trailer facility has painted aluminum skin. The office presently does not have skirting around the bottom of the trailer. The tie-down method for the unit is metal bands down to steel rods driven into the asphalt pavement below. Structurally the trailer is sound both inside and outside. T771Q does not have any visible roof leaks.

The interior outside walls is wallpaper-clad dry wall over insulation, the interior partition wall is wallpaper-clad dry wall on stud framing, and the floor is carpet on wood flooring. The ceiling is drop type with acoustical tile 2 feet x 4 feet panels. The utilities for this trailer consists of two electric heaters/air-conditioner units located outside on the west wall. The trailer has a fire sprinkler and alarm system, but it is not operable.

T771 Q is and always has been an office facility. Radioactive materials and chemicals have never been used or stored in this office facility.

2.16 Trailer T771R, Offices

This office trailer was moved to its current location during the summer of 2000. This facility was formerly T119A. The size of this trailer is approximately 28 feet wide x 70 feet long x 14 feet high for approximately 1960 square feet of floor space. This trailer is assembled from 2 trailer units of approximately 14 feet wide x 70 feet long. There are two doors leading into this trailer; one is located on the east side of the trailer, and the other door is located on the west side of the trailer. The entry doors are covered and are approximately 4 feet wide x 8 feet long x 10 feet high. The exterior of this facility has painted aluminum skin. The office presently does not have skirting around the bottom of the trailer. The tie-down method for the unit is metal bands down to steel rods driven into the asphalt pavement below. Structurally the trailer is sound both inside and outside. T771R does not have any visible roof leaks.

The interior outside walls are wallpaper-clad dry wall over insulation, the interior partition wall is wallpaper-clad dry wall on stud framing, and the floor is carpet on wood flooring. The ceiling is a drop type with acoustical tile 2-foot x 4-foot panels. The utilities for this trailer consists of two electric heaters/air-conditioner units located outside on the west wall. The trailer has a fire sprinkler and alarm system, but it is not operable.

T771 R is and always has been an office facility. Radioactive materials and chemicals have never been used or stored in this office facility.

2.17 Trailer T771T, Break Room Facility

This trailer was moved to its current location during the spring of 2000. This facility was formerly T881A. The size of this trailer is approximately 14 feet wide x 70 feet long x 9 feet high. There are two doors leading into this trailer, both of them are on the north side. Both entry doors are covered with a wood structure approximately 4 feet wide x 4 feet long x 12 feet high with 4-6 wood steps. The office presently does not have skirting around the bottom of the trailer. The tie-down method for the unit is metal bands down to steel rods driven into the asphalt pavement below. The trailer has many signs of roof leaks, which show up in the acoustical ceiling tiles near the outside walls.

The trailer's interior-outside walls are wood paneling over insulation, the interior partition walls are wood paneling on stud framing, and the floor is carpet on wood flooring. The trailer has two hard-wall rooms, one at each end of the unit. The ceiling is drop-ceiling type with acoustical tile 4 feet wide x 14 feet long panels. The two doors have key locks on them. The utilities for this trailer consist of an electric heat pump, which is located on the west end of the trailer and used for both heating and air conditioning.

T771 T is and always has been an administrative facility. Radioactive materials and chemicals have never been used or stored in this office facility.

2.18 Trailer 771-DT, Decon Trailer

The 771-DT Decon Trailer is a shower and decontamination facility mounted on a trailer. It is located north of Building 774 and directly west of the T771G Locker/Shower Facility. 771-DT is approximately 18 feet long x 8 feet wide x 8 feet high and contains approximately 96 feet of floor space. The Decon Trailer has two entrance doors, one on the north and one on the southwest corner of the trailer. The exterior walls of 771-DT are covered with enameled corrugated metal over wall insulation. The roof is a single piece of aluminum formed over insulation.

The facility is self-contained (i.e., it has its own heat, hot water heaters, and air conditioning). The facility also has two propane gas bottles mounted on the front. Electrical power for 771-DT facility comes from a power pole shared with T-771G. Other 771-DT equipment is stored and covered on the ground directly east of the facility. Radioactive materials and chemicals were never used or stored in this office facility.

2.19 Trailer T773S, Guard Post

T773S is a temporary skid-mounted guard post being used as the inside Guard Post for the "Building 771 Security Bubble". This guard post was placed in service in February 2000. It is located directly north of Building 773, the old Building 771 Guard Post. T773S is approximately 10 feet wide x 12 feet long x 10 feet high with approximately 130 square feet of floor space. There is only one entry, which is located on the south side. The unit's exterior siding is cedar-type wood siding.

T773S has always been used as a guard post. Utilities for this facility include electricity, electric heat, and air conditioning. Radioactive materials and chemicals have never been used or stored in this facility.

2.20 B714, Hydrogen Fluoride (HF) Storage

B714, built in 1964, was the storage and transfer building for anhydrous HF used in the B771 fluorination process. B714 is 14' long X 12' wide X 9' high with a floor footprint of 182 sq ft.

The facility consists of transite walls and roof attached to a black iron frame built on a concrete slab. There is a 4" gap between the top of the wall and the roofline. The roof slopes to the south. The north side has a rollup door 8' wide X 7' high. There are four partially buried angle iron channels in the concrete with the V pointing up to support the transfer cart to move the HF cylinder into position at the hookup point.

Utilities provided to this building include (1) a communication system to the HF receiving room in B771 to ensure that the receiving tank was not over filled, (2) nitrogen to purge the transfer line to the Building 771 receiver after transfer operations were complete, (3) a squeeze bottle of ammonia to check for leaks after the tank transfer piping was attached to the HF cylinder and the valves were opened, and (4) a small caustic

scrubber system to neutralize the remaining HF in the transfer piping after the transfer was made and the system was purged. There is no HVAC in this building.

2.21 Building 714A, Storage Facility

Building 714A is located south of Building 714. Building 714A was constructed during the 1964-1965 Building 771 Modification time frame. Building 714A is 4 feet 8 inches wide x 48 inches long x 4 feet 10 inches high covering 224 square feet. It is a metal frame and siding structure set on concrete piers. The structure has corrugated metal bolted to the structural steel framework on three sides. The fourth side is the opening to the storage shed. Six double-metal mesh doors that could be padlocked cover this opening. The roof is made of corrugated metal and slopes to the north.

When the Building 771's Pu Recovery fluorination process was changed from a batch to a continuous process, use of HF increased, and there was a need to have more HF cylinders on hand. Building 714A was built to store full and empty HF cylinders. There are no utilities to the facility. Building 714A is empty and out of service.

2.22 Building 715, Emergency Generator

Building 715 was built in 1975 to house Emergency Generator # 1 for Buildings 771 and 774. The building is constructed of concrete blocks and houses a diesel-powered generator and the necessary control equipment to operate the system. It is 33 feet 4 inches long x 22 feet 9 inches wide x 18 feet high covering 824 square feet. The building was built on an above-grade reinforced-concrete slab six inches thick tied to foundation walls. The walls are of concrete block construction with horizontal reinforcing at various intervals, and vertical steel reinforcing bar at the corners and at selected points in the walls. At the points where there is reinforcing bar, grout was poured into the void space in the blocks. The roof is a poured-steel reinforced-concrete slab six inches thick.

Building 715 is in service. There is no heating, ventilation and air conditioning in Building 715. There is battery power to start the diesel motor and a block heater to keep the diesel motor warm for instant starting. The facility also has a fire sprinkler and alarm system.

2.23 Building 716, Emergency Generator

Building 716 is the Emergency Generator # 2 for Buildings 771 and 774. It is a containerized unit containing a diesel-powered generator and a roof mounted muffler and exhaust stack. The generator is built into an 8 feet wide x 40 feet long x 9 feet 2 inches high cargo container for 286 square feet of floor space. The foundation consists of 18 spring-mounted vibration-dampening devices, which rest on a concrete slab slightly larger than the cargo container dimensions. The floor of the cargo container was reinforced to withstand the weight of the diesel motor and the generator. One wall has an entrance door and an air inlet with louvers. The roof is the metal top of the cargo

container, reinforced where the muffler and exhaust stack are positioned. The Building 716 walls are of ribbed-painted metal.

Building 716 is in service. It has no heating, ventilation or air conditioning. Utilities needed for this facility are battery power to start the diesel motor and a block heater to keep motor warm at all times for instant starting. The facility also has a fire sprinkler and alarm system.

2.24 Building 717, Sampling Shed

Building 717 was the magnehelic building/sampling shed for the Building 771 exhaust stack. It is 9 feet L x 7 feet W x 8 feet H covering 48 square feet of floor space. It has black-iron framed slopping roof and black-iron framed building structure with corrugated metal sides and roof. The facility has one glass-panel painted-steel access door. The facility was constructed to protect instruments from the weather when the Building 771 exhaust stack gases were sampled. The building is not in service. Radioactive materials and chemicals have never been used or stored in this facility.

2.25 Building 728

B728, aka the B728 Process Waste Pit, is the pump house and access point for two underground plenum deluge tanks for Building 771. B728 was constructed in 1953. The size of Building 728 is 9' long X 6'8" wide X 8'6" high. B728 has 101 square feet of floor space.

The facility is a reinforced concrete structure that sits partially below grade. The foundation for the building is the top of the plenum deluge catch tanks. The walls are 8-inch thick reinforced concrete with one opening in the south wall for the door. The walls are two feet below grade and three feet above grade and support a slab roof. The roof is a six-inch thick reinforced concrete slab.

There are two pumps in the building to pump any plenum deluge water to B774, a sampling system, a level detection system, and manhole covers to gain access to the Tank 292 (on the west side) and Tank 293 (on the east side). The top of the tanks is two feet below grade.

There is no HVAC system in the building. The only utility supplied to the building is electricity from B771.

Building 728 is currently inactive.

2.26 Building 770, Offices and Stockroom Facility

Building 770 is a 62 feet L x 50 feet W x 22 feet H metal pre-fabricated modular building that was built in 1965 to be used as a construction fabrication shop and pipe shop. It contains approximately 2,860 square feet and is built on a concrete slab that is tied into the building foundation walls. The walls are vertical-standing, corrugated 11-gage sheet metal panels over a Butler-type frame. On the west and south sides there are rollup truck

doors and a man-door. The roof is made of corrugated 11-gage sheet metal slopping to the north and south.

Presently it is used as a Building 771 supplies storeroom, and for offices and a war room. The walls for the offices are gypsum board over steel studs. The ceilings in the offices are gypsum board over steel studs. Electric heaters supply heating for the offices. Air conditioning is supplied by swamp coolers located in the west and east side of the building at the top of the gable. Electricity is the only utility supplied to the building. The facility is connected to the Smoke, Heat Detection and Fire Alarm System. Radioactive materials and hazardous chemicals have never been used or stored in this facility.

2.27 S770, Carpenter Storage Shed

S770 is the Carpenter Storage Shed and is located directly north of Building 771B. The facility was constructed and put into service at its present site in 1970. The storage shed is constructed from plywood, built on skids, and is approximately 6 feet wide x 16 feet long x 10 feet high. The storage shed has one set of double-plywood doors, which face east. The roof of the storage shed is covered with corrugated metal. All of the facility walls are painted plywood.

The facility is in service as an unheated storage facility. The storage shed does not have any heat or utilities. Radioactive materials and hazardous chemicals have never been used or stored in this facility.

2.28 Building 771B, Carpenter Shop

Building 771B is the Carpenter Shop for the Building 771/774 Cluster facilities. The facility is north of Building 771 and approximately 35 feet west of Building 770. Building 771B was built and placed into service in 1970. Building 771B is approximately 25 feet long x 18 feet wide x 9 feet high at the roof peak, and the facility has approximately 564 square feet of floor space, which includes add-on constructed storage space. The facility is constructed from wood on a poured concrete slab. The facility has two sets of double wooden doors and two single entry doors, all of which are on the east side of the building. The Building 771B roof is covered with corrugated metal over insulation. The exterior walls are covered with vinyl siding over insulation.

The Building 771B Carpenter Shop is in service. Utilities include electrical power to operate the various electrical carpenter tools and to provide electrical heat. Radioactive materials and hazardous chemicals have never been used or stored in this office facility. Product chemicals such as caulking, sealants, glues, etc. are used and stored in the Building 771B Carpenter Shop.

2.29 Building K771N (aka Building B771K)

Building K771N is a pre-fabricated modular facility that was moved as a newly constructed facility next to Building 773 in 1999 to serve as a hot-food building for the Building 771/774 Cluster. It is located approximately 8 feet southwest of Building 773.

The size of K771N is approximately 10 feet wide x 17 feet long x 10 feet high with 160 square feet of floor space. There are two entries, one on the north side and one on the east side, with one window on the west side. The unit siding is baked-on enamel corrugated sheet metal over insulation. The roof also is corrugated metal over insulation. The facility is skid-mounted.

The facility presently is not being used, and it is locked. Utilities are electric power for heating, cooling, and keeping food hot until served. K771N has always been a building to serve hot food. Radioactive materials and chemicals have never been used or stored in this facility.

2.30 Building 772, New Breathing Air Facility

Building 772 is 37 feet 10 inches long x 30 feet wide x 16 feet high with 1129 square feet of floor space. It was constructed in 1992 and equipped to supply HF to the process in Building 771. However, the HF supply facility never went operational (HF was never introduced to the equipment). When production at Rocky Flats was stopped, B772 was stripped out of its equipment in 1999 and converted to a supplied breathing air facility. There are two breathing air systems currently installed in the building. Two oil-free compressors are located at the east end of the building. The receiver tanks, conditioner equipment, and monitoring equipment and instrumentation for air quality are located in the west end.

B772 is constructed of cement blocks. The foundation walls are three feet below grade, which support an on-grade 6-inch thick reinforced, concrete slab. The roof is of a metal-pan construction and has a gutter on the east end of the building. The walls are cement block 15 feet high with horizontal reinforcement at intervals. There are two man-doors, one each in the east and west ends of the building and an outside wall-mounted rollup truck door on the east side. The building has no windows in it. There is no suspended ceiling in the building. The lights and the original overhead crane monorail are suspended from the I-beams, which are supported by the north and south walls. The overhead crane has been removed, but the monorail is still in place. There is no heating, ventilation and air conditioning. Electric and emergency power for the building comes from Building 771. Building 772 currently is not in operation supplying breathing air for Building 771. The facility is being SO tested and certified for breathing-air use and will be put into service later in FY 2001.

2.31 Building 772A, HF Pit

Building 772A is a 26 feet long x 13 feet wide x 6 feet 6 inches deep, poured reinforced concrete pit, covering 400 square feet. The concrete structure is an open scrubber pit. The facility was never completed due to the stoppage of production work at Rocky Flats. It was to be the support structure for the scrubber system for the HF building. The one-foot above and the five-foot below grade concrete structure supports 18-inch steel I-beams that were put into place. Building 772A was never used and will never be put into service.

2.32 Building 773, Old 771 Guard Post

Building 773 was the original guard post that personnel entered to gain access to Building 771. It was built in 1953. It is 14 feet long x 13 feet 7 inches wide x 10 feet high covering 190 square feet of floor space. The facility is constructed from reinforced concrete that has windows on all sides and three doors. There is a low counter separating the security personnel from the Building 771 personnel entering and exiting the building through two of the doors.

The foundation is a footing approximately two feet below grade that supports the walls. The walls are poured-in-place reinforced concrete that have columns between the window and door openings that go to the roof to support it. At the window openings there is a sloping-out poured-sill plate. The top of the sill plate is five feet above the floor. The windows are of the multi-paned steel sash type. The roof is a poured-in-place reinforced concrete slab that extends three feet from the walls. The floor is a poured-in-place, on-grade reinforced concrete slab. The doors are made of steel with two wire reinforced glass panes in the top half of the door. Heating for the building is provided by wall-mounted electric heating units. The original building was not air-conditioned.

When the PAC was completed, the facility was converted for use as an Incident Command Post. When the building was converted to the incident command center, a roof-mounted air conditioner was put in place to cool the electronics that were placed in the building. The duct for the air was brought into the building through a hole in the roof. Electricity, emergency power, and the Life, Safety/Disaster Warning System all comes from Building 771. Presently, Building 773 is unused. Radioactive materials and chemicals have never been used or stored in this facility.

2.33 Building 775, Sanitary Sewage Lift Station

Building 775 is an active sewage lift station for the Building 771 Cluster sewage system. It was built in 1953. It is 16 feet long x 9 feet wide x 6 feet high structure. The 152 square foot building sits over the sewage receiver tank and covers the pumping system that lifts the sewage up the hill and into the gravity drain system to the sewage treatment facility (Building 995). The tank is concrete, has a 2,000 gallon capacity, and receives sanitary flows from Buildings 771/774, the sewage lift station for the restroom trailer (T771L), and Building 790, as well as flows from the B790 footings drainage system.

The foundation for the building is the top of the sewage tank. The building construction is of reinforced concrete. The walls start two feet below grade and extend four feet above grade, support the roof, and are 12 inches thick. There is one entrance into the building on the north side, which has a locked steel door. The roof is a poured reinforced-concrete six-inch thick slab that extends six inches from walls. A vent pipe goes through the roof to allow the sewer gases to escape from the sewage holding tank under the building. A manhole in the roof allows lowering of equipment to the bottom of the pump room during maintenance operations. The walls of the building inside and out are not painted, but the

steel door is painted. The ceiling of the building is the underside of the roof slab and is not painted

There are electric heaters on one wall to supply heat to the building in the winter. Ventilation for the building is a weatherproof, manually operated louver in the south wall of the building and a fixed weatherproof louver in the door. Electric power is supplied from Building 771

2.34 Building 771/774 Cluster Tanks

The following is a listing of Building 771/774 Cluster Tanks along with a brief description of each tank and current status:

- Tank 173, Propane Storage Tank, located southwest of T771B Office Trailer, supplies gas for heating and cooling in the office trailer. Tank 173 is in service
- Tank 174, Liquid Argon Storage Tank, located north of B771C, is operationally empty and out of service
- Tank 175, Liquid Nitrogen Storage Tank, was located north of B771C and has been removed
- Tank 176, Sodium Hydroxide Tank, is located north of B774 near the entry door. Historically sodium hydroxide spills have occurred during filling and sampling operations. Tank 176 sits on IHSS/PAC 700-139 1 (N) land/soils. Tank 176 is operationally empty and out of service
- Tank 179, Propane Storage Tank, located southeast of T771G, used for heating and hot water in the T-771G and 771-DT Locker and Shower Facilities. Tank 179 is in service
- Tank 180, Cooling Water Storage Tank, located on the B774 roof near the B774 Cooling Tower. Tank 180 operationally empty and out of service.
- Tank 182, Neutralized Waste 2nd Stage Holding Tank, aka Tank 66, is an underground storage tank located southeast of B774. Tank 182 is part of IHSS/PAC 700-124 2 and IHSS/PAC 700-125. The tank was overfilled, and 500 gallons of process wastes were released to the environment. Tank 182 is out of service and has been filled with foam
- Tank 183, Neutralized Waste 2nd Stage Holding Tank, aka Tank 67, is an underground storage tank located southeast of B774. Tank 183 is adjacent to Tank 182 and is part of IHSS/PAC 700-124 3. Tank 183 is out of service and has been filled with foam
- Tank 184, Neutralized Waste 2nd Stage Holding Tank, aka Tank 68, is an underground storage tank located southeast of B774. Tank 184 is adjacent to Tank 182 and is part of IHSS/PAC 700-124 1. Tank 184 is out of service and has been filled with foam
- Tank 185 (aka Tank 771-4204), Potassium Hydroxide Holding Tank, is located southeast of B714. Tank 185 sits on IHSS/PAC 700-139 2 (S) land/soils. Tank 185 is operationally empty and out of service

- Tank 192, Underground Diesel Storage Tank (aka Diesel UST Tank 20), is located west of B714A. Tank 192 is out of service and has been filled with foam
- Tank 193, Underground Diesel Storage Tank (aka Diesel UST Tank 21), is located southeast of B715. Tank 193 is out of service and has been filled with foam
- TK-21A, Aboveground Diesel Storage Tank (aka TK-21), is located southeast of B715 TK-21A is in service
- Tank 194, Hydrofluoric Acid Storage Tank (aka Tank D-44 HF Mist/KOH Tank), is located east of B714 Tank 194 sits on IHSS/PAC 700-139 2 (S) land/soils Tank 194 is operationally empty and out of service
- Tank 195, Hydrofluoric Acid Storage Tank (aka Tank D-45 HF/KOH Scrubber), is located northeast of B714. Tank 195 sits on IHSS/PAC 700-139 2 (S) land/soils Tank 195 is operationally empty and out of service.
- Tank 197 (aka Tank 207), LP Gas Storage Tank 450-781, has a 18,377-gallon capacity, is located southeast of B771/774, and is out of service
- Tank 292, Underground Plenum Firewater Collection Tank (aka UST Tank 38), is located west of B728 In the past, the tank held process wastewater. Tank 292 is part of IHSS/PAC 126 1 Tank 292 has known leaks, and groundwater has periodically leaked into this tank. Tank 292 is in service
- Tank 293 Underground Plenum Firewater Collection Tank (aka UST Tank 39), is located east of B728 In the past, the tank held process wastewater Tank 293 is part of IHSS/PAC 126 2 Tank 293 has known leaks; and groundwater has periodically leaked into this tank Tank 293 is in service
- Tank 774A, the east Steam Condensate Tank (aka Tank D-108), is located northwest of B774 Tank 774A is located within IHSS/PAC 700-1108 and IHSS/PAC 700-139 1 (N) land/soils Tank 774A is located on a concrete slab, and the bottom is reportedly corroded Tank 774A is operationally empty and out of service
- Tank 774B, the west Steam Condensate Tank (aka Tank D-107), is located northwest of B774 Tank 774B is located within IHSS/PAC 700-1108 and IHSS/PAC 700-139 1 (N) land/soils Tank 774B is located on a concrete slab, and the bottom is reportedly corroded Tank 774B is operationally empty and out of service

3.0 SUMMARY OF CHARACTERIZATION ACTIVITIES

An RLC was designed to demonstrate that DOE-added radioactive materials are not present or have been removed to the extent that residual levels of contamination are below the Derived Concentration Guideline Levels (DCGLs) and that the facilities can be released without restrictions and/or disposed of as sanitary waste/construction debris. This section of the RLCR Supplement presents data quality objectives (DQOs) used, historical and process knowledge, and additional characterization performed to release the 52 facilities. Section 3.0 also describes the survey units for characterizing the facilities, and defines the methods used to perform radiological surveys, scans and sampling. The RLC followed the guidance provided in the Site Reconnaissance Level Characterization Plan (RLCP) and Pre-Demolition Survey Plan (PDSP).

As indicated in Sections 1.0 and 2.0, T771Q and T771T were included in this RLC. However, these facilities were previously characterized under the Group B RLC and were not characterized as part of this RLC. T771Q was T883C, and T771T was T881A. Both were moved into the 771 complex and renamed. Refer to the Group B RLCR and project file for characterization data.

3.1 Data Quality Objectives

The following section revisits the original DQOs used in designing the RLC Characterization Package

The Problem

The problem consists of the unknown volume of floors, walls, ceilings and roofing, and the unknown extent of radiological and chemical contamination on and in floors, walls (interior and exterior), ceilings and roofing (i.e., whether or not the facilities can be released)

The Decision

The decision is whether release criteria for radiological and chemical constituents are met (see Decision Rules below), based on types and quantities of any radiological and chemical contamination present

Inputs to the Decision

The inputs to the decision include historical and process knowledge, data collected from this RLC, and release criteria and waste management regulations (see Decision Rules below)

Decision Boundaries

The decision boundaries are the spatial confines of the facilities, including slabs, floors, walls, ceilings, roofing and any fixed equipment associated with the 52 facilities listed in

Table 1-1. Interior and exterior surfaces are included, including those below grade
Environmental media were not considered within the project boundaries

Decision Rules

This section presents the rules to support the characterization decisions, specific to each type of contamination. Decision rules are applied based on process knowledge, facility walkdowns, and/or radiological surveys

Radionuclides

- If all radiological survey and scan measurements are below the surface contamination guidelines provided in DOE Order 5400.5 (Radiation Protection of the Public and Environment), the related surface is considered not radiologically contaminated
- If any radiological survey or scan measurement exceeds the surface contamination guidelines provided in DOE Order 5400.5, the related survey unit must be evaluated per the statistical tests described in Section 7.0 of the RFETS Pre-Demolition Survey Plan
- If any radiological sample measurement exceeds the volume contamination thresholds provided in the NRA Verification Program (refer to Kaiser-Hill letter to DOE, RFFO, Application of Surface Contamination Guidelines from Department of Energy Order 5400.5 - WAH-064-98, March 10, 1998), the related volume is classified as radiologically contaminated

Hazardous Waste

If decommissioning waste is mixed with or contains a listed hazardous waste, or if the waste exhibits a characteristic of a hazardous waste, then the waste is considered hazardous waste in accordance with 6 CCR 1007-3, Part 261 and 268

Hazardous Substances

If material contains a listed hazardous substance above the CERCLA reportable quantity (40 CFR 302.4), the material is subject to CERCLA regulation (i.e., notification requirements)

Beryllium

If surface concentrations of beryllium are equal to or greater than $0.2 \mu\text{g}/100 \text{ cm}^2$, the material is considered beryllium contaminated. However, this decision rule does not apply to this RLC. No sampling and analysis was conducted. There is no record of beryllium operations ever having been conducted in any of these facilities.

Polychlorinated Biphenyls (PCBs)

- If material contains PCBs from the manufacturing process at concentrations ≥ 50 ppm, the material is considered PCB Bulk Product Waste and subject to the requirements of 40 CFR 761

- If PCB contamination from a past spill/release is suspected, or if a PCB spill is discovered that has not been cleaned up, the associated material is considered PCB Remediation Waste and subject to the requirements of 40 CFR 761. PCB remediation waste includes materials disposed of prior to April 18, 1978, that are currently at concentrations ≥ 50 ppm PCBs, regardless of the concentration of the original spill, materials which are currently at any volume or concentration where the original source was ≥ 500 ppm PCBs beginning on April 18, 1978, or ≥ 50 ppm PCBs beginning on July 2, 1979, and materials which are currently at any concentration if the PCBs are spilled or released from a source not authorized for use under 40 CFR 761
- If a waste or item contains PCBs in regulated concentrations, the waste or item is considered PCB-regulated material and subject to the requirements of 40 CFR 761.

Asbestos

If any one sample of a sample set representing a homogeneous medium results in a positive detection for asbestos (i.e., $>1\%$ by volume), then material is considered asbestos containing material (ACM; 40 CFR 763 and 5 CCR 1001-10)

Tolerable Limits on Decision Error

Tolerable limits on decision error (95% confidence) are applied to the design of survey and sampling plans, as well as actual measurement data resulting from implementation of the plans. Survey area size limits are based upon the requirements of Table 1 of PRO-475-RSP-16 01. Survey areas were developed based on current radiological postings, the procedurally driven size limitations, function and use of area, and where possible, maintaining contiguous survey areas.

Decision error does not apply to asbestos sample sets per 40 CFR 763. Results are compared with the decision rule on a sample-by-sample basis.

Optimization of Plan Design

Radiological characterization was conducted on interior floors, walls and ceilings, and exterior walls and roofs as necessary. The following criteria were used to develop the radiological survey/sampling characterization package.

Radiological field measurement methods and instrumentation are described in Section 3 0 of the site PDSP (MAN-127-PDSP).

Radiological sampling and preparation for laboratory measurements are described in Section 3 0 of the site PDSP (MAN-127-PDSP).

If hazardous waste, hazardous substance, beryllium, PCB or asbestos surveys/samples are required, sampling and analysis are conducted in accordance with Section 6 0 of the D&D Characterization Protocol.

3.2 Radiological Characterization

Radiological characterization was performed to define the nature and extent of radioactive contamination that may be present on or in the 52 facilities. This section reviews the historical radiological information on these facilities, or lack thereof, and discusses the RLC conducted. Radiological hazards are discussed in Section 4.0, and RLC data are presented in Attachments A - AF of this report. The RLC radiological survey packages containing field data are maintained in the 771 Closure Project RLC file.

3.2.1 Summary of Historical Information

Historically, radiological surveys for B771C, the B771 exhaust tunnel and stack, outbuildings, trailers and tanks may have been performed, but the data are not readily available. There are no Plant Action Tracking System items outstanding on these facilities, which indicates no associated radiological program deficiencies.

3.2.2 Summary of RLC Data Collected

Although historical review indicates no use of DOE-added radioactive material in most of the B771 outbuildings, trailers and tanks, insufficient quantitative radiological data existed to designate these structures as non-impacted (Type 1) pursuant to the site PDSP. Also, insufficient data existed on Type 2 facilities. Therefore, radiological surveys were performed in and on all facilities. A summary of each survey unit and the data collected is provided in Table 3-1. Survey unit maps are provided in Attachment AA.

Table 3-1 Survey Units and Data Types for 771 Closure Project Type 1 Facilities

| Survey Area | Survey Unit ^(S & 9) | Type | Class | Description | % Scan | # TSAs/ Smears | # Rad. Samples |
|-------------|------------------------------------|------|-------|---------------------------------------|--------|-------------------|-------------------|
| AJ | 771001 | 1 | 3 | B772 | 10 | 15 | 0 |
| | 771002 | 1 | 3 | T771A Interior | 10 | 15 | 0 |
| | 771003 | 1 | 3 | T771B Interior | 10 | 15 | 0 |
| | 771004 | 1 | 3 | T771C Interior | 10 | 15 | 0 |
| | 771005 | 1 | 3 | T771E Interior | 10 | 15 | 0 |
| | 771006 | 1 | 3 | T771G Interior | 10 | 15 | 0 |
| | 771007 | 1 | 3 | T771H Interior | 10 | 15 | 0 |
| | 771008 | 1 | 3 | T771J Interior | 10 | 15 | 0 |
| | 771009 | 1 | 3 | T771K Interior | 10 | 15 | 0 |
| | 771010 | 1 | 3 | Exterior of Trailers E, H, J, K | 10 | 15 | 0 |
| | 771011 | 1 | 3 | Exterior of Trailers A, B, C, G | 10 | 15 | 1 ⁽¹⁾ |
| | 771012 | 1 | 3 | T771F | 10 | 15 | 0 |
| | 771013 | 1 | 3 | T771L | 10 | 15 | 0 |
| | 771014 | 1 | 3 | T771MB | 10 | 15 | 0 |
| | 771015 | 1 | 3 | T771M, S770 | 10 | 15 | 0 |

| | | | | | | | |
|----|--------|-----|-----|---|------------------|-------------------|--------------------|
| | | | | & K771N | | | |
| | 771016 | 1 | 3 | 714/714A | 10 | 15 | 1 ⁽¹⁾ |
| | 771017 | 1 | 3 | 715/716/717 | 10 | 15 | 1 ⁽¹⁾ |
| | 771018 | 1 | 3 | 772A | 10 | 12 ⁽⁶⁾ | 0 |
| | 771019 | 1 | 3 | 770/771B | 10 | 15 | 1 ⁽¹⁾ |
| | 771020 | 1 | 3 | B773/T773S/B 775 | 10 | 15 | 1 ⁽³⁾ |
| | 771023 | 2 | 2 | B728 Exterior | 50 | 15 | 1 ⁽³⁾ |
| | 771024 | 1 | 3 | Tank Exteriors T-774B, T- 21A, T-182, T- 183, T-194, T- 195, & T-197 (cover only) | 10 | 9 ⁽⁴⁾ | 0 |
| | 771025 | 1 | 3 | Tank Exteriors T-774A, T-173, T-174, T-176, T-179, T-180, T-184 & T-185 (cover only) | 10 | 6 ⁽⁴⁾ | 0 |
| AI | 771026 | N/A | N/A | IDEC West End Interior | 10 | 7 ⁽²⁾ | 0 |
| | 771027 | N/A | N/A | IDEC East End Interior | 10 | 7 ⁽²⁾ | 0 |
| | 771030 | 1 | 3 | T771R T771-DT | 10 | 15 | 0 |
| AB | 771035 | 2 | 2 | 771C, Rooms 302, 303, 305, 306, 308, & 309 | 0 ⁽⁷⁾ | 15 | 15 ⁽¹⁰⁾ |
| | 771036 | 2 | 2 | 771C, Rooms 301 and 304 | 0 ⁽⁷⁾ | 15 | 15 ⁽¹⁰⁾ |
| AG | 771037 | 2 | 2 | B771 Exhaust Stack | 0 ⁽⁸⁾ | 15 | 37 ⁽¹⁰⁾ |

- 1 Coupon sample collected to verify the presence of Po-210 versus DOE-Added Radioactivity
- 2 Survey could not be completed due to equipment interference PDS will be completed following equipment removal
- 3 Concrete samples collected to verify the presence or absence of DOE-Added Radioactivity
- 4 Survey could not be completed due to the location of the tanks in a wetlands area PDS will be completed at a later date
- 5 Survey units include both facility interior and exterior unless otherwise specified
- 6 Survey could not be completed due to standing water PDS will be completed prior to removal
- 7 Radiological conditions are expected to change in these areas (D&D activities are on-going)
Therefore, surface scanning will be performed following the completion of D&D
- 8 Surface scanning and surface contamination surveys have not been successful in detecting elevated activity Sampling is more prudent due to the uneven surface
- 9 Facility Type and Class were initially determined prior to surveys/sampling Facility Type is revised based on RLC/PDS results (see Section 7.0)
- 10 Paint samples collected to verify the presence or absence of DOE-Added Radioactivity

3.2.3 Sampling and Field Measurement Methods, Procedures and Equipment

Measurements were performed to evaluate the contaminants of concern in B771 (i.e., Pu-239 and Am-241 -- transuranic alpha-emitters). The TSA measurements were collected with a NE Electra using a DP-6 probe (90-second counts). Removable activity measurements were analyzed with an Eberline SAC-4 (two-minute counts). Surface scans were performed with the NE Electra at a scan rate of 1.5 inches per second. Refer to Attachment AC for *a priori* instrument MDC calculations.

Radiological survey packages were developed for each survey unit in accordance with RFETS Radiological Safety Practices (RSP) 16 01, "Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure," RFETS RSP 16 02, "Radiological Surveys of Surfaces and Structures," and RFETS RSP 16 05, "Radiological Survey/Sample Quality Control."

Specific TSA and removable survey locations were selected using a random number generator for all facilities. Scan locations (for Type 1 facilities) were biased toward heavy foot-traffic areas and areas likely to collect airborne particulates. If a random location was inaccessible, the measurement was obtained as close as possible to the original location, and the new location was annotated on the survey map.

Measurement locations were clearly identified with labels or permanent markings to provide a method of referencing survey results to survey measurement locations. These measurement locations were incorporated into a grid map with a one-square meter reference coordinate system. Measurement results as well as statistical data analyses are presented in Attachments A – Z and AD – AF for each survey unit.

If elevated readings were observed on the metal roofs and walls of trailers, an investigation was performed to verify the presence of Po-210 versus DOE-added radioactivity. Po-210 is a radon progeny that selectively oxidizes to metal surfaces. This phenomenon has been observed on other structures at RFETS, and has been demonstrated at other nuclear facilities. The elevated roof activity was dispositioned per RFETS Technical Basis Document TBD-00156, Using Graphical Data Distribution Analysis to Distinguish between Background and DOE-Added Materials in Environmental Data Sets, which provides a method of statistically evaluating the data collected from the affected surfaces. Initially, the random locations on the roof were relocated to other surfaces of the building exterior (refer to the individual data summaries for a description of the locations that were moved). Next, twenty (20) total surface activity measurements were collected at random locations across the affected surfaces (roof surfaces). The data was then plotted, and a statistical test performed to verify that the activity represented a single log-normal distribution with 95% confidence. If the statistical evaluation did not conclude that the elevated activity was due to a single log-normal distribution, as would be expected for natural radioactivity, then a coupon sample (2 inch diameter) was collected and analyzed to verify the presence of Po-210 and the absence of DOE-added radioactivity (Pu-239 and Am-241) (refer to Attachment AB for the Po-210 investigation data and coupon sample results). Technical Basis Document TBD-00153, Use of the

OASIS for Direct Differentiation between Po-210 and DOE-added Materials, provides a description of the OASIS system and supporting QA evaluations

When elevated readings (i.e., ≥ 100 dpm/100 cm²) were observed on a porous or painted surfaces (Survey Units 771020, 771023, 771035, 771036 and 771037), a concrete or paint sample was collected and submitted to the Building 559 laboratory for isotopic analysis (for Pu-239, Pu-239/240, and Am-241)

3.2.4 Laboratory Analysis

Radiological coupon samples collected from Survey Units 771011, 771016 and 771017 were analyzed using the Oxford Alpha Spectroscopy Integrated System (OASIS) (refer to Technical Basis Document TBD-00153, Use of the OASIS for Direct Differentiation between Po-210 and DOE-added Materials)

The coupon and concrete samples collected from Survey Units 771019, 771020, 771023, 771035, 771036 and 771037 were submitted to RFETS laboratories and/or approved contracted laboratories and were analyzed via a Site-approved method (see Section 6.2.3) The laboratories have an established quality assurance/quality control program that assures the validity of the analytical results The laboratory analytical methods used are capable of measuring levels at or below 50% of the established release criteria All results state the detection limit for the analysis Results are detailed in the Data Summaries (Attachments A – Z and AD – AF) for each individual survey unit

3.3 Chemical Characterization

Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on or in the 52 facilities Characterization was based on a review of historical and process knowledge and visual inspections, and is presented in this section No historical data are available on these facilities The need for additional sampling and analysis, if any, is also discussed Related hazards are discussed in Section 4.0

3.1.1 Summary of Historical Information

Information on contaminants of concern (i.e., asbestos, beryllium, RCRA/CERCLA constituents, lead in paint, and PCBs) is presented below

Asbestos. No historical asbestos inspection data exist for any of the 52 facilities An asbestos inspection was required for RLC

Beryllium: Beryllium operations were never conducted in any of the 52 facilities (refer to the D&D Facility Characterization Interview Checklist, the Type I Facility Checklist for the 771 Closure Project Facilities, and the Location of Known Beryllium Areas) In addition, five beryllium wipes samples were taken from the 771 stack on June 13, 2000, and all samples were less than <0.1 $\mu\text{g}/100\text{ cm}^2$ Therefore, consistent with the RLCP and the PDSP, beryllium sampling is unnecessary and was not conducted

RCRA/CERCLA Constituents [including metals and volatile and semi-volatile organic compounds (VOCs & SVOCs)]: According to historical and process knowledge, most of the facilities were not used for operations involving hazardous chemicals (D&D Facility Characterization Interview Checklist and Type I Facility Checklist for the 771 Closure Project Facilities) B771C was used to store waste drums, however, no releases/spills are known to have occurred in the building, and no evidence of spills was observed during facility inspection. No chemical contamination of the B771 exhaust tunnel and stack is suspected. The trailers were used for offices, lockers, showers, break rooms, rest rooms, and guard posts. T771M is a new portable structure holding telecommunication equipment. B772 and B772 have never been put into service. B773 was a guard post, and K771N was a food service facility. B775 is a sanitary lift station, and B728 is the pump house for fire system deluge water. B717 was never used to store chemical samples or hazardous chemicals. B770, S770 and B771B may have been used to store hazardous chemicals (e.g., paints and thinners), but no evidence of spills was observed during facility inspections. B714 stored anhydrous HF, and all systems have been drained/emptied. B714A is an open-air metal structure that was used to store HF cylinders and is now out of service. Tank 180 held water and is now empty, Tank 174 holds liquid argon, and Tanks 173, 179 and 197 hold propane. B715 and B716 contain emergency generators that hold diesel fuel. Tank 21A holds additional diesel for the generators. Tanks 192 and 193 held diesel, but they have been emptied and foamed (i.e., closed in accordance with RFCA Attachment 13). Tank 176 held sodium hydroxide, and Tank 185 held potassium hydroxide, and both tanks have been emptied. Tanks 292 and 293 hold fire system deluge water, and chemical contamination is highly unlikely. Tanks 182, 183 and 184 held neutralized process wastes, but these tanks have also been emptied and foamed. Tanks 774A and 774b held condensate, have been emptied, and most likely are not chemically contaminated. Therefore, sampling for chemical contaminants in these facilities was not conducted as part of this characterization effort. Sampling of Type 2 facilities will be conducted during in-process characterization to confirm that facility systems and tanks have been fully drained and that residual contamination is not present, and to ensure compliant waste management.

Lead in paint: No information exists on the lead content of paints on the 52 facilities. However, Environmental Waste Compliance Guidance #27, Lead-based Paint (LBP) and Lead-based Paint Debris Disposal, states that LBP debris generated outside of high contamination areas shall be managed as non-hazardous (solid) wastes and need not be sampled unless the potentially lead-containing component is to be scabbled or otherwise comprise a separate waste stream. Therefore, because paints on most of these facilities will not be removed, analysis for lead in paint was not conducted. If paints are removed from any of the facilities, the removed paint will be characterized for waste management purposes pursuant to 6 CCR 1007-3.

Polychlorinated Biphenyls (PCBs): Based on historical and process knowledge, none of the 52 facilities contained equipment that contained PCB oils, except potentially the drum counter lift in B771C. Therefore, no PCBs could have been released and contaminated any of the 51 facilities. The B771C lift does not currently contain PCBs. Also, no

releases/spills of oil are known to have occurred around the B771C lift, and no evidence of spills was observed during facility inspection. Therefore, sampling for PCBs in the floor was not necessary for RLC and was not conducted. Because the B771 lift could have contained PCB oils historically, if oil stains are observed on the floor after the lift is removed, concrete samples will be taken and analyzed for PCBs as part of in-process characterization

Some paints on facility surfaces may contain PCBs at concentrations ≥ 50 ppm. However, it is expected that 50 out of the 52 facilities (i.e., all except B771C and the 771 exhaust tunnel) will be reused, returned to commerce, or disposed of off-site at a permitted facility. Therefore, based on Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition, sampling of paints on the 50 facilities is not required and was not conducted. Paint samples from B771C and the exhaust tunnel are currently being analyzed for PCBs. Current plans are to decontaminate B771C, as necessary, and to recycle the concrete on site, and to decontaminate the exhaust tunnel, as necessary, and to leave it in place. Any paints in the B771 exhaust tunnel will be removed. All removed paints and demolition debris will be managed in compliance with regulations governing hazardous waste (6 CCR 1007-3) and PCB bulk product waste (i.e., 40 CFR 761).

Some fluorescent light ballasts containing PCBs exist in some of the facilities due to their age. All PCB ballasts will be removed and segregated as a separate waste stream prior to disposition of the facilities, and managed in compliance with Site procedures and applicable regulations (e.g., 40 CFR 761).

3.3.2 Summary of RLC Data Collected

Based on historical information presented in Section 2.0 and the inspections conducted, the only RLC chemical data collection required was sampling for asbestos-containing material. An asbestos inspection of the facilities was conducted by a CDPHE-certified asbestos inspector.

4.0 HAZARDS

This section presents physical, radiological and chemical hazards by facility, including data from radiological field measurements and laboratory analysis. Radiological data are presented for each survey unit in Attachments A – Z and AD – AF.

The RLC confirmed that most of the facilities (inside and outside) do not contain radiological contamination above the release limits prescribed in DOE Order 5400.5 and the RFETS Radiological Control Manual. Radiological contamination was found in one area within B771C and in the B771 stack. There is also potential for radiological contamination in both lift stations (i.e., B728 and B775), and on/in Tanks 182 – 184, 292 and 293, and 774A and 774B. Several exterior survey units contained numerous total surface activity measurements above the release limits prescribed in DOE Order 5400.5 and the RFETS Radiological Control Manual. These results were suspected to be elevated due to naturally occurring radioactive material (NORM), specifically Po-210, deposited on the roof surface. OASIS results validated the presence of Po-210 and the absence of DOE-added material in all exterior survey units, except the exterior of B770 where Am-241 contamination was identified. Radiological hazards are summarized by facility in Table 4-1.

For each facility, the potential for a chemical hazard due to each of the following contaminants was considered:

- asbestos,
- beryllium,
- lead and other metals,
- VOCS/SVOCs, and
- PCBS

Each potential chemical hazard was evaluated primarily based upon historical and process knowledge coupled with visual inspections (refer to Section 3.3). Each facility also was inspected for asbestos-containing material (ACM) and chemical spills, including PCB leaks from PCB light ballasts. Some samples were taken and analyzed for ACM. Chemical hazards are summarized by facility in Table 4-1 and presented by chemical in Section 4.2. In addition, some facilities still contain chemical product, and some may contain chemical residues, as indicated in Table 4-1.

Physical hazards associated with the facilities consist of those common to standard industrial environments and include hazards associated with energized systems, utilities, compressed gas, diesel fuel, and trips and falls. There are no unique hazards associated with the different facilities. The buildings have been relatively well maintained and are in good physical condition, and therefore, do not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and

Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practices.

Table 4-1 Summary of Radiological and Chemical Hazards

| Facilities | Radiological Hazard | Chemical Hazard | Asbestos Hazard |
|--|--|---------------------------|------------------|
| T771 A - C, E - H, J - M, MB, Q, R, T & DT | None | None | Yes (T771 A & C) |
| T773 S | None | None | None |
| B714 | None | Potential HF (interior) | Yes |
| B714 A | None | None | None |
| B715 | None | Diesel (product) | Yes |
| B716 | None | Diesel (product) | None |
| B717 | None | None | None |
| B728 | Potential (interior) | None | None |
| B770 | Am-241 on exterior | None | None |
| S770 | None | None | None |
| B771 B | None | None | Yes |
| K771 N | None | None | None |
| B772 | None | None | None |
| B772 A | None | None | None |
| B773 | None | None | Yes |
| B775 | Potential (interior) | None | None |
| Tanks 173 & 179 | None | Propane (product) | None |
| Tank 174 | None | None | None |
| Tank 176 | None | Potential NaOH (interior) | None |
| Tank 180 | None | None | Yes |
| Tanks 182 - 184 | Potential | None | None |
| Tank 185 | None | Potential KOH (interior) | None |
| Tanks 192 & 193 | None | None | None |
| Tanks 194 & 195 | None | Potential HF (interior) | None |
| Tank 197 | None | Propane (product) | Yes |
| Tank 21A | None | Diesel (product) | None |
| Tanks 292 & 293 | Potential | None | Yes |
| Tanks 774A & 774B | Potential | None | Yes |
| B771C (Annex) | Surface media contamination on floor of Room 303 | None | Yes |
| B771 Exhaust Tunnel & Stack | Elevated activity to a height of ~20 feet | None | None |

Some below-grade portions of the 52 facilities could be impacted (contaminated) by Individual Hazardous Waste Sites (IHSSs) and Under Building Contamination (UBC)

- The B771C foundation could be impacted by UBC 771, UBC 774 and IHSS 700-150 3 Impacts will be defined during future investigation of the UBC and IHSS, B771C in-process characterization and the Pre-Demolition Survey, and/or characterization of B771C demolition debris (B771C is a Type 2 facility)

- The exterior of the 771 Exhaust Tunnel (surrounded by soil) could be impacted by UBC 771 and B771 IHSSs. Impacts will be defined during future investigation of the UBC and IHSSs, in-process characterization and the Pre-Demolition Survey, and/or characterization of demolition debris (This tunnel is a Type 2 facility)
- The bottom of the B770 slab (below grade) could be impacted by IHSSs north of B771 and B774 Impacts will be defined during IHSS investigation, in-process characterization and the Pre-Demolition Survey, and/or characterization of demolition debris (B770 is a Type 2 facility)
- The below-grade portion of B728 and Tanks 292 and 293, the below-grade portion of B775 and its tank, the below-grade portions of Tanks 182 – 184, and the bottom of the slabs for Tanks 774A and 774B could be impacted by IHSSs Impacts will be defined during IHSS investigation, in-process characterization and the Pre-Demolition Survey, and/or characterization of demolition debris. (These facilities are Type 2 facilities)
- The bottom of the B771B slab (below grade) and the below-grade portions of the supports for Trailers 771 A, C, G and DT could be impacted by IHSSs north of B771 and B774 These areas will be specifically characterized when they are removed as part of waste characterization activities (The facilities are Type 1 facilities)
- The bottom of the B773 slab (below grade) could be impacted by IHSS 700-150 2 The bottom of the slab will be specifically characterized when it is removed as part of waste characterization activities (B773 is a Type 1 facility)
- The bottom of the slabs for Tanks 174 and 176 (below grade) could be impacted by IHSSs north B774 The bottom of the slabs will be specifically characterized when the slabs are removed as part of waste characterization activities (The facilities are Type 1 facilities)

4.1 Radiological Hazards

The RLC (serving also as the PDS for the Type 1 facilities) confirmed that most of the B771 Cluster facilities addressed in this RLCR Supplement (inside and outside) do not contain radiological contamination above the release limits prescribed in DOE Order 5400.5 and the RFETS Radiological Control Manual. Radiological contamination was found in one area within B771C and in the B771 stack. There is also potential for radiological contamination in both lift stations (i.e., B728 and B775), and on/in Tanks 182 – 184, 292 and 293, and 774A and 774B. Exceptions are presented in Table 4-2.

As indicated in Section 3.0, T771Q and T771T were not characterized as part of this RLC. They were characterized as part of the Group B RLC pursuant to PDS requirements. Characterization results, based on historical knowledge and survey measurements, indicate that both trailers are free of interior and exterior contamination. Refer to the Group B RLCR and project file for characterization data.

Verification surveys will be conducted on concrete slabs after tanks and other structures (e.g., B716 and B771B) have been removed and before the slabs are removed. Pre-release evaluations also will be conducted on tanks and other equipment prior to their removal (e.g., the tank under B775). In addition, the bottom of the B772A pit will be surveyed after the standing water has been removed. The water and any sediment will also be characterized. Type 2 facilities will be investigated further during In-Process and Pre-Demolition Characterization.

Table 4-2 Summary of Observed Elevated Activity, 771 Type 1 and 2 Facilities

| Survey Unit | Facility Description | Findings | Disposition (per Section 3.2.3) | Method | Type |
|-------------|--|---|---|---------------------------------|------|
| 771010 | Exterior of Trailers E, H, J, K | Elevated activity on surface (> 100 dpm/100 cm ²) Elevated activity was initially identified from the survey of random locations on the roof (refer to Attachments A to Z for a description of locations that were moved) | Verified to be due to natural radioactivity Po-210 (refer to Attachment B) | Lognormal distribution | 1 |
| 771011 | Exterior of Trailers A, B, C, G | | | Sample | 1 |
| 771012 | T771F (Roof) | | | Lognormal distribution | 1 |
| 771013 | T771L (Roof) | | | Lognormal distribution | 1 |
| 771014 | T771MB (Roof) | | | Lognormal distribution | 1 |
| 771016 | 714 (Roof) | | | Two (2) samples – wall and roof | 1 |
| 771017 | 715, 716, 717 (Roof) | | | Sample | 1 |
| 771030 | T771R, T771-DT (Roof) | | | Lognormal distribution | |
| 771019 | B770 | Elevated activity on exterior walls and roof (> 100 dpm/100 cm ²) | Confirmed Am-241 | Coupon Sample | 2 |
| 771035 | 771C, Rooms 302, 303, 305, 306, 308, & 309 | Elevated paint sample (~150 dpm/100 cm ²) on floor of Room 303 | Confirmed Pu-239/240 and Am-241 | Paint Sample | 2 |
| 771037 | B771 Exhaust Stack | Low levels of elevated activity identified in concrete matrix (ranging from 0.3 to 62.1 pCi/g) Additional sampling will be performed prior to demolition to define depth and height of elevated activity | Confirmed Pu-239/240 and Am-241 | Concrete Samples | 2 |
| 771020 | B773 | Elevated activity on concrete roof (< 100 dpm/100 cm ²) | Low-levels (4 and 19.2 dpm/100 cm ² , respectively of Pu-239 detected) Suitable for unrestricted release (levels << transuranic limit of 100 dpm/100 cm ²) | Concrete Sample | 1 |
| 771023 | B728 Exterior | | | Concrete Sample | 2 |

Refer to Attachment AB for the Po-210 investigation data

4.2 Chemical Hazards

4.2.1 Asbestos

Eleven of the 52 facilities contain asbestos. Facilities containing asbestos, the location of the asbestos, the type of asbestos, and the hazard are presented in Table 4-3.

Table 4-3 Asbestos Hazards in the 771 Closure Project Type 1 Facilities

| Facility | Location | Type of Asbestos | Abatement of Hazard ¹ |
|-------------------|--|-----------------------|----------------------------------|
| B771C | Drywall, tape & joint compound (Rm 301& 303) | Non-friable | Potential for damage |
| | Pipe fittings & hanger saddles (Rm 301& 303) | Friable | Potential for damage |
| | Cementitious board (Rm 306) | Non-friable | Potential for damage |
| B714 | Cementitious board (exterior walls and roof) | Non-friable | Potential for damage |
| B715 | Vibration damper cloth | Non-friable (assumed) | Potential for damage |
| | Electrical arc chutes | Non-friable (assumed) | Potential for damage |
| | Roofing material and paint | Non-friable | Potential for damage |
| | Drywall, tape and joint compound | Non-friable | Potential for damage |
| | Exhaust flue insulation | Friable | Potential for significant damage |
| B773 | Tar paper and fiberglass on ductwork on roof HVAC | Non-friable | Potential for damage |
| | Electrical wiring | Non-friable | Potential for damage |
| B771 B | Electrical wiring | Non-friable | Potential for damage |
| T771 A | Window putty | Non-friable | Potential for damage |
| | Black tar and green shingles | Non-friable | Potential for damage |
| T771 C | Vinyl flooring | Non-friable | Potential for damage |
| | Black tar and gray shingles | Non-friable | Potential for damage |
| Tank 180 | Sealer/mastic on tank and valve flanges | Non-friable | Potential for damage |
| Tank 197 | Cementitious board around the manifold station | Non-friable | Potential for damage |
| Tanks 774A & 774B | Insulation on piping, fittings, reductions and flanges | Friable | Potential for significant damage |

¹Denotes the potential for ACM being damaged during abatement. If there is damage, there is an exposure potential. The greater the damage, the greater the exposure potential.

The asbestos data are contained in Asbestos Characterization Report For The Building 771/774 Out Buildings, October 2000, which is maintained in the 771 Closure Project RLC file.

4.2.2 Metals (including beryllium and lead in paint)

According to historical and process knowledge, metals, including beryllium and lead, were not used or stored in the 52 facilities, except B771C, and therefore, no related contamination is present. B771C was used to store waste drums that may have contained metals, however, no releases/spills are known to have occurred in the building, and no evidence of spills was observed during facility inspection. Some paints may contain lead.

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and other metals, however, Environmental Waste Compliance Guidance #27, Lead-based Paint (LBP) and Lead-based Paint Debris Disposal, states that LBP debris generated outside of high contamination areas shall be managed as non-hazardous (solid) wastes and need not be sampled unless the potentially lead-containing component is to be scabbled or otherwise comprise a separate waste stream. In addition, lead could be present in incandescent lamps, and mercury could be present in fluorescent lamps. Any removed paint will be characterized for waste management purposes pursuant to 6 CCR 1007-3, and all hazardous waste (e.g., scabbled LBP, and lead- and mercury-containing lamps) will be managed pursuant to 6 CCR 1007-3.

4.1.3 VOCs/SVOCs

According to historical and process knowledge, chemical processes were not performed in the facilities. Some chemicals were stored in some of the facilities, however, no chemical spills are known to have occurred, and no evidence of spills was observed during facility walkdowns. Also, B771C was used to store waste drums that may have contained VOCs/SVOCs, however, no releases/spills are known to have occurred in the building, and no evidence of spills was observed during facility inspection. Therefore, no chemical contamination and related hazards are suspected.

4.1.4 PCBs

Based on historical and process knowledge, none of the 52 facilities contained equipment that contained PCB oils, except maybe the drum lift in B771C. Therefore, no PCBs could have been released and contaminated any of the 51 facilities. The B771C lift does not currently contain PCB oils. Also, no releases/spills of oil are known to have occurred around the B771C lift, and no evidence of spills was observed during facility inspection. Because the B771 lift could have contained PCB oils historically, if oil stains are observed on the floor after the lift is removed, concrete samples will be taken and analyzed for PCBs as part of in-process characterization.

Some paints on facility surfaces may contain PCBs at concentrations ≥ 50 ppm. However, it is expected that 50 out of the 52 facilities (i.e., all except B771C and the 771 exhaust tunnel) will be reused, returned to commerce, or disposed off-site at a permitted facility. Therefore, based on Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition, sampling of paints on the 50 facilities was not conducted. Paint samples from B771C and the exhaust tunnel are currently being analyzed for PCBs. Current plans are to decontaminate B771C, as necessary, and to recycle the concrete on site, and to decontaminate the exhaust tunnel, as necessary, and to leave it in place. Any paints in the B771 exhaust tunnel with PCB concentrations ≥ 50 ppm will be removed. All removed paints and demolition debris will be managed in compliance with regulations governing hazardous waste (6 CCR 1007-3) and PCB bulk product waste (i.e., 40 CFR 761).

Some fluorescent light ballasts containing PCBs exist in some of the facilities due to their age. All PCB ballasts will be removed and segregated as a separate waste stream prior to disposition of the facilities, and managed in compliance with Site procedures and applicable regulations (e.g., 40 CFR 761).

5.0 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The disposition of the facilities not reused will generate a variety of wastes. Table 5-1 presents the estimated volumes of potential wastes by facility and waste type. Most of the waste can be disposed of as sanitary waste, except radioactive materials, asbestos containing material, PCB bulk product waste, and lead- and mercury-containing lamps. Radiologically contaminated materials will be disposed of as low level radioactive, unless it is decontaminated to below release limits. No hazardous or beryllium wastes are anticipated, except maybe some incandescent lamps containing lead and fluorescent lamps containing mercury. However, sampling of Type 2 facilities will be conducted during in-process characterization to confirm that facility systems and tanks have been fully drained and that residual contamination is not present, and to ensure compliant waste management. Any hazardous wastes will be managed pursuant to Site procedures and State regulations (i.e., 6 CCR 1007-3). Asbestos and PCB Bulk Product Waste, including fluorescent light ballasts and demolition debris containing PCB paints, will be managed pursuant to Site asbestos abatement and waste management procedures, including notification requirements.

Table 5-1 Estimated Waste Volumes by Waste Type and Facility

| Facility | Concrete | Wood | Metal | Corrugate/ Sheet Metal | Wall Board | ACM | Other Waste |
|----------------------|------------------------|---------------------|--------------------------|---------------------------|---------------------|--|--------------------------------|
| B771C | 12,730 ft ³ | None | 100 ft ³ | None | Unknown | 2,000 ft ² of drywall, tape & joint compound 32 ft ² of cementitious board 330 pipe fittings & hanger saddles | Unknown |
| 771 Exhaust Stack | 4,700 ft ³ | None | None | None | None | None | None |
| 771-DT | None | 40 ft ³ | 40 ft ³ | 25 ft ³ | 300 ft ³ | None | 300 ft ³ insulation |
| T771A | None | 200 ft ³ | 1,000 ft ³ | 500 ft ³ | 200 ft ³ | 10 ft ² window putty 40 ft ² tar & shingles | 500 ft ³ insulation |
| T771B | None | 200 ft ³ | 200 ft ³ | 100 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771C | None | 50 ft ³ | 100 ft ³ | 50 ft ³ | 75 ft ³ | 800 ft ² vinyl flooring 120 ft ² tar & shingles | 250 ft ³ insulation |
| T771E | None | 300 ft ³ | 200 ft ³ | 50 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771F | None | 100 ft ³ | 200 ft ³ | 100 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771G | None | 50 ft ³ | 100 ft ³ | 50 ft ³ | 80 ft ³ | None | 250 ft ³ insulation |
| T771H | None | 300 ft ³ | 200 ft ³ | 50 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771J | None | 200 ft ³ | 200 ft ³ | 100 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771K | None | 200 ft ³ | 200 ft ³ | 100 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771L | None | 100 ft ³ | 50 ft ³ | 50 ft ³ | 100 ft ³ | None | 150 ft ³ insulation |
| T771M | 7 cu ft | 10 ft ³ | 10 ft ³ | 2 ft ³ | 150 ft ³ | None | None |
| T771MB | None | 150 ft ³ | 50 ft ³ | 100 ft ³ | 200 ft ³ | None | 200 ft ³ insulation |
| T771Q | None | 200 ft ³ | 200 ft ³ | 100 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771R | None | 200 ft ³ | 200 ft ³ | 100 ft ³ | 200 ft ³ | None | 500 ft ³ insulation |
| T771T | None | 75 ft ³ | 100 ft ³ | 50 ft ³ | 100 ft ³ | None | 150 ft ³ insulation |
| T773S | None | 300 ft ³ | None | 25 ft ³ | 50 ft ³ | None | None |

| Facility | Concrete | Wood | Metal | Corrugate/ Sheet Metal | Wall Board | ACM | Other Waste |
|-----------|-----------------------|---------------------|-----------------------|---------------------------|---------------|---|--------------------------------|
| B714 | 100 ft ³ | None | 20 ft ³ | None | None | 300 ft ² of cementitious board | None |
| B714A | 50 ft ³ | None | 50 ft ³ | 25 ft ³ | None | None | 100 ft ³ insulation |
| B715 | 2,100 ft ³ | None | 100 ft ³ | 50 ft ³ | None | Vibration damper cloth Arc chutes 900 ft ² roofing material 120 ft ² flue insulation | None |
| B716 | 350 ft ³ | None | 160 ft ³ | 180 ft ³ | None | None | None |
| B717 | None | None | 2 ft ³ | 10 ft ³ | None | None | None |
| B728 | 288 ft ³ | None | 5 ft ³ | None | None | None | None |
| B770 | 1,900 ft ³ | None | 1,000 ft ³ | 2,000 ft ³ | None | None | 500 ft ³ insulation |
| B772 | 2,100 ft ³ | None | 250 | None | None | None | None |
| B772A | 2,000 ft ³ | None | 150 ft ³ | None | None | None | None |
| B773 | 700 ft ³ | None | None | None | None | 250 ft ² tar paper & fiberglass insulation Electrical wiring | None |
| B775 | 150 ft ³ | None | None | None | None | None | None |
| S770 | 4 ft ³ | 50 ft ³ | None | 5 ft ³ | None | None | None |
| B771B | 300 ft ³ | 200 ft ³ | None | 10 ft ³ | None | Electrical wiring | None |
| K771N | None | 100 ft ³ | 50 | 25 ft ³ | None | None | 150 ft ³ insulation |
| Tank 173 | None | None | N/A | None | None | None | None |
| Tank 179 | None | None | N/A | None | None | None | None |
| Tank 197 | None | None | N/A | None | None | 150 ft ² cementitious board | None |
| Tank 174 | 50 ft ³ | None | N/A | None | None | None | None |
| Tank 176 | 200 ft ³ | None | 33 ft ³ | None | None | None | None |
| Tank 180 | None | None | 5 ft ³ | None | None | 4 ft ² sealer/mastic | 10 ft ³ insulation |
| Tank 182 | 944 ft ³ | None | 10 ft ³ | None | None | None above ground | None |
| Tank 183 | 944 ft ³ | None | 10 ft ³ | None | None | None above ground | None |
| Tank 184 | 1,873 ft ³ | None | 10 ft ³ | None | None | None above ground | None |
| Tank 185 | 144 ft ³ | None | 25 ft ³ | None | None | None | None |
| Tank 192 | None | None | 60 ft ³ | None | None | None above ground | None |
| Tank 193 | None | None | 60 ft ³ | None | None | None above ground | None |
| Tanks 21a | 50 ft ³ | None | N/A | None | None | None | None |
| Tank 194 | 1 ft ³ | None | 2 ft ³ | None | None | None | None |
| Tank 195 | 1 ft ³ | None | 1 ft ³ | None | None | None | 2 ft ³ Kynar |
| Tank 292 | 1,660 ft ³ | None | 10 ft ³ | None | None | None above ground | None |
| Tank 293 | 1,660 ft ³ | None | 10 ft ³ | None | None | None above ground | None |
| Tank 774A | 576 ft ³ | None | 53 ft ³ | None | None | Insulation on piping, fittings, reductions and flanges – unknown quantities | None |
| Tank 774B | 576 ft ³ | None | 53 ft ³ | None | None | Insulation on piping, fittings, reductions and flanges – unknown quantities | None |

N/A - not applicable, tanks will be returned to product vendor

6.0 DATA QUALITY ASSESSMENT (DQA)

6.1 Introduction

Data used in making management decisions for decommissioning and waste management must be of adequate quality to support the decisions. Adequate data quality for decision-making is required by applicable K-H corporate policies (K-H, 1997, §7 1 4 and 7 2.2), as well as by the customer (DOE, RFFO, Order O 414 1, Quality Assurance, §4 b (2)(b)). Regulators and the public also expect decisions and data that are technically and legally defensible. Verification and validation of the data ensure that data used in decisions resulting from the Pre-Demolition Survey (PDS) are usable and defensible.

Verification and validation (V&V) of this RLCR are the primary components of the DQA. V&V constitutes the cornerstone of the DQA, because statistical tests and material background determinations relative to decision-making for radiological survey units were not implemented nor required. Instead, measurement results were compared, on a one-to-one basis, with release criteria given in DOE Order 5400 5. The PDS results could, theoretically, be used to conduct Sign Tests for decisions, but because all individual measurements were less than the DCGL_w (excluding confirmed NORM values), the survey units meet release criteria without further data reduction. This DQA supports conclusions in the report through implementation of the guidelines taken from the following MARSSIM sections:

- §4 9, Quality Control
- §8 2, Data Quality Assessment
- §9 0, Quality Assurance & Quality Control
- Appendix E, Assessment Phase of the Data Life Cycle
- Appendix N, Data Validation using Data Descriptors

DQA was performed on measurement and sample results obtained from the Survey Units listed Table 3-1. These Survey Units are traceable to specific building locations.

6.2 Verification of Results

Verification ensures that data produced and used by the project are documented and traceable per quality requirements. Verification consisted of reviewing the project's data relative to three subsets:

- Radiological scans,
- Static surveys for removable and total contamination, and
- Radiochemical data resulting from samples taken and subsequently analyzed via alpha spectrometry

Consistent with similar PDS reports at the RFETS, verification will confirm the following:

- Chain-of-Custody was intact from initial sampling through transport and final analysis,
- Preservation and hold-times were within tolerance, and
- Format and content of the data are clearly presented relative to goals of the project (i.e., to determine, with at least 95% confidence, that the survey units of interest are adequate for unrestricted radiological release)

Verification of the PDS data will also address quality records representing implementation of the following quality controls:

- Calibrations (radiochemistry & surveys), for accuracy,
- Laboratory control samples (LCS -- radiochemistry), for accuracy,
- Blanks (radiochemistry), for accuracy,
- Duplicate measurements (radiochemistry & surveys), for precision,
- Chemical yield (radiochemistry), for accuracy,
- Count times (radiochemistry & surveys), for sensitivity, and
- Sample preparations (radiochemistry), for accuracy, representativeness

All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units. Each Survey Package is systematically reviewed by the responsible Radiological Engineer, a peer reviewer, and finally, Radiological Engineering Management.

All relevant Quality records associated with the PDS decisions will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of the completion of this RLC.

6.3 Validation Of Results

Validation consists of a technical review of all data that directly support the PDS decisions, so that any limitations of the data relative to project goals are delineated, and the associated data are qualified (caveated) accordingly. Data were validated relative to the following:

- The DQOs of the project as defined in Section 3.1 (i.e., did the final data achieve the initial DQOs of the project?), and
- Quality criteria discussed throughout various sections in the MARSSIM (sections noted previously)

MARSSIM criteria for the broad topic of "data quality assessment" used in final status surveys generally falls within the generic categories of quality assurance, quality control, data validation, and data assessment (including verification and validation) Table 6-1 provides a "crosswalk" that lists the primary MARSSIM sections and generic data quality criteria (at top) and their corresponding implementation via the RLCR and project files

All of the significant MARSSIM criteria listed in Table 6-1 are summarily addressed within the "PARCC Parameters" discussion presented below PARCC parameters are congruent with "data descriptors" in the MARSSIM parlance and address characteristics of the data that must be defined for scientific integrity and defensibility. Recall that at least one "X" in each column of the table constitutes achievement of the MARSSIM quality objective (vs one "X" in each row) The following discussion of the PARCC parameters -- Precision, Accuracy, Representativeness, Comparability, and Completeness, also include discussion of bias and sensitivity, two more data descriptors emphasized in MARSSIM

PARCC PARAMETERS

Precision

1) Radiological Surveys

Duplicate measurements were periodically acquired (5% frequency of real surveys) on the MARSSIM survey grids All duplicate measurements were within tolerance based on the acceptance criterion that both results be below DCGL_w The only exception occurred where punctures of the mylar sheets (within the probe face) were noted for limited QC measurements Given the descriptive statistics of the Survey Unit, which exhibit maximum and mean values well below the DCGL_w, as well as a relatively low standard deviation, repeatability of measurements within the unit is well defined, and missing QC measurements do not suggest a compromise in measurement repeatability within the unit

2) Radiochemistry

Results from laboratory duplicates, analyzed via standard alpha spectroscopy, indicate adequate reproducibility based on duplicate results within statistical tolerance values (>90% confidence of equivalency between the original sample and the duplicate)

Accuracy (And Bias)

1) Radiological Surveys

Accuracy of radiological surveys is satisfactory based on RFETS-programmatic annual calibrations that establish instrument efficiencies and sensitivities for all instrumentation used on this project Daily source checks also provided periodic checks to ensure that all sensors are within tolerance during daily operations Calibration and calibration check results were within the RFETS and industry-standard requirement of 20% of the applicable reference standard values Full-scale multi-point calibrations provided

accuracies of $\pm 10\%$ prior to implementation of survey instruments in the field, consistent with guidelines put forth in ANSI-N323 d

Distance measurements recorded on maps are within 3% of actual distances based on the laser technology used for distance measurements associated with the surveys

Key work-controlling procedures that contributed to accuracy (and representativeness) of the radiological surveys consisted of the following

- Kaiser-Hill, LLC , 1999 Radiological Safety Practices RFETS, Golden, CO
- Kaiser-Hill, LLC., 2000 Use of the OASIS for Direct Differentiation between Po-210 and DOE-Added Materials, Technical Basis Document (TBD) - 00153.

Biases were not evaluated for specific instrumentation, as instruments were not dedicated to the project, but were rather acquired from a general pool of instruments available to the B771 complex as a whole. Limited tolerance charting of a number of instruments used on the project exhibited no bias over time. However, for all survey measurements acquired, pre-measurement and post-measurement performance checks were performed, and all readings were in tolerance.

2) Radiochemistry

Accuracies of the OASIS alpha spectroscopy results were acceptable based on establishing a batch-specific efficiency for the system and measurement of reference standards within control limits (237Np, as established by ± 3 sigma bounds about the arithmetic mean).

Use of the on-site OASIS consisted of two parts: 1) establishing presence/absence of DOE-added radionuclides at the sensitivities specified for the OASIS (i.e., 50% DCGLw), and 2) quantification of Po-210 concentrations relative to levels measured in the field with hand-held instruments.

Background values were approximately 1.2 dpm/100 cm² for the sample batches, which is typical for the OASIS. Background values approaching 2 dpm/100 cm² require corrective actions to the OASIS protocol, but this upper limit was not approached during analysis of the samples.

Because no radiochemical results exceeded action levels, evaluation of preparation blank data was not required.

Verification and validation of sample result accuracies from the on-site B559 laboratory were adequate based on satisfactory percent (tracer) yields and LCS recoveries between 75% and 125%. Random (counting) error was quantified as 2 sigma, total error was not quantified. Preparation blanks also confirmed that no significant cross-contamination occurred in the analysis process. These results, from two samples, confirmed that no transuranics were present at the locations where elevated survey readings were acquired.

All QC results from off-site alpha spectroscopy laboratories were within tolerance, specifically for blanks and spikes. All tracer yields were also within tolerance, even though two results from the 771035 Survey Unit had relatively lower yields at about 36% for Am-241.

Representativeness

Samples and surveys are representative based on the following criteria:

- Familiarity with facilities -- multiple walk-downs and collaborations by management and technical staff,
- Implementation of industry-standard Chain-of-Custody protocols;
- Compliance with sample preservation and hold times, and
- Documented and (site) approved methods

All survey measurements in excess of the DCGL_w -- for Type 1 areas -- resulted from random TSA measurements from exterior roofing surfaces (all sheet metal with the exception of one concrete surface). These elevated readings represent a consistent phenomena across the RFETS, where Po-210 (NORM) has effectively deposited as a fixed radioactive material. All graphical representations of the sheet metal data, as well as radiochemical analysis of suspect samples, have further corroborated this phenomena for the Type 1 facilities within the 771 Complex. The elevated alpha activity associated with the concrete sample was verified as not being DOE-added material.

Several elevated results (i.e., above unrestricted release limits for TSA measurements) from the paints in Survey Unit 771037 ("the Stack") are not considered representative due to the high sample masses used in the conversion of measurement units -- from pCi/g to dpm/100 cm². Most of the radiochemical results were at or near the minimum detectable activity (MDA) of the alpha spectroscopy method, yet because the samples had a significant depth component relative to the area sampled, the sample masses used in the conversion were unrealistically high, and consequently, dpm/100 cm² values were also unrealistically high.

Completeness

Building Survey Units are complete with respect to the required content and appropriate reviews/approvals (management, technical, and QA). All radiological Survey Packages for Type 1 facilities in the 771 Complex are complete, with the exception of those listed below:

- 771026 - ceiling areas inaccessible until equipment strip-out (IDEC West End Interior)
- 771027 - ceiling areas inaccessible until equipment strip-out (IDEC East End Interior)
- 771018 - standing water on the floor prevents alpha surveys (B772A, Type 1 facility)

- 771024 - access problems due to wetlands restrictions (Tank Exteriors, variety, Type 2 facility)
- 771025 - access problems due to wetlands restrictions (Tank Exteriors, variety, Type 2 facility)
- 771035 - decontamination is required in limited areas, survey package remains open to support final surveys at a later date (Type 2 facility)
- 771036 - survey unit is "clean", but configuration control of area has not yet been affected (i.e., work continues in the area), survey package remains open to support final surveys at a later date (Type 2 facility)
- 771037 ("Stack") - decontamination is required, survey package remains open to support final surveys at a later date (Type 2 facility)

Although the data are incomplete for the Survey Units listed above relative to unrestricted release of the survey units, these partial data sets are adequate for typing of the facilities. Nature and extent of contamination in Survey Units 771024, 771025, 771035 and 771037 is consistent with a Type 2 classification, Type 1 classification is appropriate for the remaining facilities itemized above. These Survey Units will be completed prior to decisions regarding unrestricted release (of the facilities that contain the said survey units).

Consistent with EPA's G-4 DQO process, the radiological survey design was optimized by checking actual measurement results (acquired during final status survey) against model output with original estimates. Use of actual sample/survey (result) variances in MARSSIM's DQO model confirms that an adequate number of samples/surveys were acquired. All radiological results are valid without qualification, and form data sets with adequate quantities and quality of data for release decisions.

No beta/gamma survey designs were implemented for the 771 facilities based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Stated differently, based on the well-established suite of actinides historically used at the RFETS, all of these actinides would emit alpha radiation in exceedance of the applicable transuranic DCGLs before other DCGLs would be exceeded for their respective uranium species - the Building 371 Technical Position Paper, Basis for Performing Solely Alpha Contamination Surveys for Building 371/374, corroborates the use of this conservative approach.

Comparability

All results presented are comparable with radiological survey and radiochemistry data on a site- and DOE-complex wide basis. This comparability is based on:

- Use of standardized engineering units in the reporting of measurement results,
- Consistent sensitivities of measurements at (50% DCGL_w (50% DCGL_{EMC} for scans),

- Use of site-approved procedures (RSPs and TBDs),
- Systematic quality controls, and
- Thorough documentation of the planning, sampling/analysis process, and data reduction into formats designed for making decisions posed from the project's original data quality objectives

One aspect of comparability recently added to the PDS repertoire is a graphical method and screening tool to differentiate NORM (specifically Po-210) from DOE-added radionuclides. This technique relies on a graphical comparison of point-clustering as depicted on a log-normal frequency distribution. The graphical technique was used in several instances for this project; details of the methodology are given in the RFETS Technical Basis Document (TBD) - 00156, Using Graphical Data Distribution Analysis to Distinguish between Background and DOE-Added Materials in Environmental Data Sets. Generally stated, if the said graphical displays of data (typically at least 30 data points representing TSA values) suggest more than one population of radionuclides present (e.g., NORM vs. transuranics), additional samples must be taken to positively identify and quantify the unknown radionuclides. Attachment AB presents the results of these graphical results for the 771 Facilities of interest.

Sensitivity

Adequate sensitivities, in units of dpm/100 cm², were attained for all surveys and radiochemical methods implemented based on MDAs at 50% of the transuranic DCGL_w (50% DCGL_{EMC} for scans). Derivations of MDAs are given in Attachment AC for the Electras and the OASIS; MDAs for removable contamination measurements are derived from 3-PRO-112-RSP-02 01, Radiological Instrumentation. The nominal MDAs for each survey and radiochemical method are summarized as follows:

- Surveys (Eberline SAC-4) - removable contamination 10 dpm/100 cm²
- Surveys (NE Electra) - total surface contamination (TSA) 50 dpm/100 cm²
- Surveys (NE Electra) - scans <126 dpm/100 cm²
- Radiochemistry (standard alpha spec) - transuranic contamination <10 dpm/100 cm²
- Radiochemistry (OASIS) - transuranic contamination <50 dpm/100 cm²

6.4 Summary

In summary, the data presented in this report have been verified and are qualified as valid and complete for typing facilities and/or comparison with release criteria (action levels) as stated in the original DQOs. All media sampled and surveyed within Type 1 facilities, relative to both total and removable alpha activities, yielded results less than action levels for the associated contaminants of concern. Therefore, the Survey Units for Type 1 facilities in question meet the free-release criteria with the confidences stated in this section and throughout the report.

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7.0 FACILITY CLASSIFICATION

Based on the analysis of radiological, chemical and physical hazards, the 52 facilities were classified pursuant to the RFETS Decommissioning Program Plan (DPP, K-H, 1999) Classification was based on a review of historical and process knowledge, and newly acquired RLC data, and will be subject to concurrence by the Colorado Department of Public Health and the Environment DPP classification criteria are defined as follows

Type 1 facilities are considered "free of contamination"

Type 2 facilities contain no significant contamination or hazards, but are in need of decontamination. The extent of contamination is such that routine methods of decontamination should suffice and only a moderate potential exists for environmental releases during decommissioning

Type 3 facilities contain significant contamination and/or hazards

Thirty five of the 52 facilities are classified as Type 1 facilities Refer to Table 7-1 These facilities are not contaminated, and present no radiological or physical hazards PCBs are present in some of the fluorescent light ballasts and may be present in paints Also, lead could be present in incandescent lamps, and mercury could be present in fluorescent lamps The presence of PCBs in light ballasts and paint, the presence of lead and mercury in lamps, and/or the presence of asbestos do not make a facility a Type 2 as long as PCB-, lead-, mercury- and asbestos-containing items are removed pursuant to Site asbestos abatement and waste management procedures

Seventeen of the facilities are classified as Type 2 facilities (refer to Table 7-1) Even though the exhaust tunnel and stack are considered to be Type 2 facilities, they will be decommissioned as Type 3 facilities, along with B771, in accordance with the 771 Closure Project Decommissioning Operations Plan The Type 2 facilities will be further characterized during in-process characterization and PDS

To ensure that the Type 1 facilities remain free of contamination and that Pre-Demolition Survey data remain valid, isolation controls will be established, and the facilities will be posted accordingly. Surveys also will be conducted prior to removal In addition, all demolition debris from Individual Hazardous Substance Sites (IHSSs) will be characterized

Table 7-1 Facility Hazards and Classification, 771 Closure Project Type 1 & Type 2 Facilities

| Facility | Chemical Hazards | Location | Radiological Hazards | Location | Building Classification ¹ |
|---|-----------------------------------|--|---|---------------------------------------|--|
| B771C | Asbestos | Rms 301 to 309 | One elevated paint sample (~150 dpm/100 cm ²) | Room 303 floor | Type 2 |
| 771 Exhaust Tunnel & Stack | None | NA ² | Low levels of elevated activity identified (ranging from 0.3 to 62.1 pCi/g) Additional sampling will be performed prior to D&D to define depth and height of elevated activity | Interior stack surface below ~20 feet | Type 2 (to be decommissioned as a Type 3 per the DOP) |
| T771A - C, E - H, J - L, MB, Q, R, T & DT | Asbestos | T771 A & C | None | NA ² | Type 1 |
| T771M | None | NA ² | None | NA ² | Type 1 |
| T773S | None | NA ² | None | NA ² | Type 1 |
| B714 | Asbestos Potential HF residues | Exterior walls & roof Interior | None | NA ² | Type 2 |
| 714A | None | NA ² | None | NA ² | Type 1 |
| B715 & 716 | Asbestos Diesel (product) | B715 Both tanks | None | NA ² | Type 1 |
| B717 | None | NA ² | None | NA ² | Type 1 |
| B728 | None | NA ² | Potential contamination | Interior | Type 2 |
| B770 | None | NA ² | Am-241 | Exterior wall & roof | Type 2 |
| S770 & B771B | Asbestos | B771B wiring | None | NA ² | Type 1 |
| K771N | None | NA ² | None | NA ² | Type 1 |
| B772 | None | NA ² | None | NA ² | Type 1 |
| B772A | None | NA ² | None | NA ² | Type 1 |
| B773 | Asbestos | Wiring and roof | None | NA ² | Type 1 |
| B775 | None | NA ² | Potential contamination | Interior & tank system | Type 2 |
| TK173, 179 & 197 | Propane (product) Asbestos | All tanks TK 197 manifold station | None | NA ² | Type 1 |
| TK174 | None | NA ² | None | NA ² | Type 1 |
| TK176 | Potential NaOH residue | Interior | None | NA ² | Type 2 |
| TK180 | Asbestos | Flanges | None | NA ² | Type 1 |
| TK182 - 184 | None | NA ² | Potential contamination | All 3 tanks | Type 2 |
| TK185 | Potential KOH residue | Interior | None | NA ² | Type 2 |
| TK192 & 193 | None | NA ² | None | NA ² | Type 1 |
| TK21a | Diesel (product) | Interior | None | NA ² | Type 1 |
| TK194 & 195 | Potential HF residues | Interior | None | NA ² | Type 2 |
| TK 292 & 293 | None | NA ² | Potential contamination | Both tanks | Type 2 |
| TK774A & 774B | Asbestos | Piping, fittings, reductions & flanges | Potential contamination | Both tanks | Type 2 |

¹ Building classification does not include environmental media beneath or adjacent to the facility foundation/slab

² Not Applicable

PCBs are present in some of the fluorescent light ballasts and may be present in paints. Also, lead could be present in incandescent lamps, and mercury could be present in fluorescent lamps. The presence of PCBs in light ballasts and paint, the presence of asbestos, and/or the presence of lead and mercury in lamps do not make a facility a Type 2 as long as PCB bulk product waste, asbestos-containing material, and lead- and mercury-containing lamps are removed pursuant to Site asbestos abatement and waste management procedures.

8.0 REFERENCES

- ANSI-N323A-1997, Radiation Protection Instrumentation Test and Calibration
- DOE/RFEO, CDPHE, EPA, 1996 Rocky Flats Cleanup Agreement (RFCA), July 19, 1996
- DOE Order 5400 5, "Radiation Protection of the Public and the Environment "
- DOE Order 414 1A, "Quality Assurance "
- EPA, 1994 "The Data Quality Objective Process," EPA QA/G-4
- K-H, 1997 "Kaiser-Hill Team Quality Assurance Program", Rev. 5, December, 1997
- K-H, 1998 Facility Disposition Program Manual, MAN-076-FDPM, Rev 1, September 1999
- K-H, 1999 Decontamination and Decommissioning Characterization Protocol, MAN-077-DDCP, Rev. 1, June 19, 2000
- K-H, 1999 Decommissioning Program Plan, June 21, 1999
- K-H, 2000 Pre-Demolition Survey Plan, MAN-127-PDSP, Rev 0, October 3, 2000
- MARSSIM - Multi-Agency Radiation Survey and Site Investigation Manual, December 1997 (NUREG-1575, EPA 402-R-97-016)
- RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition
- RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal

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ATTACHMENT A

Survey Unit 771001 Data Summary

SURVEY UNIT 771001 DATA

Survey Unit 771001 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

-8.2
43.8
14.8
13.8

dpm/100 cm²
dpm/100 cm²
dpm/100 cm²
dpm/100 cm²

TRANSURANIC
DCGL_w

100

dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

-1.5
2.7
0.0
1.3

dpm/100 cm²
dpm/100 cm²
dpm/100 cm²
dpm/100 cm²

TRANSURANIC
DCGL_w

20

dpm/100 cm²

Survey Unit 771001 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|----------|-----------------------|--------------------------------|------------------------------|----------|-----------------------|----------------------------|--|
| Meter Model | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | | |
| Instrument # | 1259 | N/A | N/A | 17 | 2383 | N/A | N/A | 2.7 | |
| Cal Due Date | 10/4/00 | N/A | N/A | | 1/18/01 | N/A | N/A | | |
| Efficiency (cik) | 0.21 | N/A | N/A | | 0.21 | N/A | N/A | | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 1259 | 09/07/00 | 33 | 7.8 | | | | | |
| 2 | 1259 | 09/07/00 | 33 | 7.8 | | | | | |
| 3 | 1259 | 09/07/00 | 87 | 33.9 | | | | | |
| 4 | 1259 | 09/07/00 | 73 | 27.2 | 2383 | 09/08/00 | 73 | 21.7 | |
| 5 | 1259 | 09/07/00 | 33 | 7.8 | | | | | |
| 6 | 1259 | 09/07/00 | 73 | 27.2 | | | | | |
| 7 | 1259 | 09/07/00 | 20 | 1.6 | | | | | |
| 8 | 1259 | 09/07/00 | 27 | 4.9 | | | | | |
| 9 | 1259 | 09/07/00 | 33 | 7.8 | | | | | |
| 10 | 1259 | 09/07/00 | 40 | 11.2 | | | | | |
| 11 | 1259 | 09/07/00 | 60 | 20.9 | | | | | |
| 12 | 1259 | 09/07/00 | 107 | 43.6 | | | | | |
| 13 | 1259 | 09/07/00 | 00 | -4.2 | | | | | |
| 14 | 1259 | 09/07/00 | 53 | 17.6 | | | | | |
| 15 | 1259 | 09/07/00 | 40 | 11.2 | 2383 | 09/09/00 | 80 | 25.0 | |
| | | | | MIN | | | | | |
| | | | | MAX | | | | | |
| | | | | MEAN | | | | | |
| | | | | SD | | | | | |
| | | | | Transuranic DCG _{4.0} | | | | | |
| | | | | 100 | | | | | |

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Survey Unit 771001 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|--------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 9/7/00 | 10 | 0.5 | 0.6 |
| 2 | 844 | 9/7/00 | 10 | 0.5 | -0.3 |
| 3 | 1351 | 9/7/00 | 00 | 0.0 | -1.5 |
| 4 | 1052 | 9/7/00 | 20 | 1.0 | 2.1 |
| 5 | 844 | 9/7/00 | 10 | 0.5 | -0.3 |
| 6 | 1351 | 9/7/00 | 10 | 0.5 | 0.0 |
| 7 | 1052 | 9/7/00 | 00 | 0.0 | -0.9 |
| 8 | 844 | 9/7/00 | 20 | 1.0 | 1.2 |
| 9 | 1351 | 9/7/00 | 00 | 0.0 | -1.5 |
| 10 | 1052 | 9/7/00 | 10 | 0.5 | 0.6 |
| 11 | 844 | 9/7/00 | 30 | 1.5 | 2.7 |
| 12 | 1351 | 9/7/00 | 10 | 0.5 | 0.0 |
| 13 | 1052 | 9/7/00 | 00 | 0.0 | -0.9 |
| 14 | 844 | 9/7/00 | 10 | 0.5 | -0.3 |
| 15 | 1351 | 9/7/00 | 00 | 0.0 | -1.5 |
| | | | | MIN | -1.5 |
| | | | | MAX | 2.7 |
| | | | | MEAN | 0.0 |
| | | | | SD | 1.3 |
| | | | Transuranic DCCGL _w | | 20 |

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ATTACHMENT B

Survey Unit 771002 Data Summary

SURVEY UNIT 771002 DATA

Survey Unit 771002 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX 29.2 dpm/100 cm²
 MEAN 3.4 dpm/100 cm²
 STD DEV 9.9 dpm/100 cm²

TRANSURANIC
 DCGL_w 100 dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN -1.5 dpm/100 cm²
 MAX 0.6 dpm/100 cm²
 MEAN -0.5 dpm/100 cm²
 STD DEV 0.8 dpm/100 cm²

TRANSURANIC
 DCGL_w 20 dpm/100 cm²

Survey Unit 771002 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|--------------|-------------------------|-----------------------|--------------------------------|------------------------------|----------|-------|----------------------------|-----------------------|
| Meter Model | Instrument # | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | | | Local Area Bkgd (cpm) |
| | 2378 | N/A | N/A | | 2375 | N/A | N/A | | 5.0 |
| Cal. Due Date | 11/1/00 | N/A | N/A | | 10/10/00 | N/A | N/A | | |
| Efficiency (c/d) | 0.23 | N/A | N/A | | 0.21 | N/A | N/A | | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 2378 | 06/05/00 | 6.3 | 4.4 | | | | | |
| 2 | 2378 | 06/05/00 | 5.3 | 0.1 | | | | | |
| 3 | 2378 | 06/05/00 | 9.3 | 17.4 | | | | | |
| 4 | 2378 | 06/05/00 | 12.0 | 29.2 | | | | | |
| 5 | 2378 | 06/05/00 | 6.0 | 3.1 | 2375 | 06/05/00 | 6.7 | 17.6 | |
| 6 | 2378 | 06/05/00 | 7.3 | 8.8 | 2375 | 06/05/00 | 6.0 | 14.3 | |
| 7 | 2378 | 06/05/00 | 4.7 | -2.6 | | | | | |
| 8 | 2378 | 06/05/00 | 4.7 | -2.6 | | | | | |
| 9 | 2378 | 06/05/00 | 4.0 | -6.6 | | | | | |
| 10 | 2378 | 06/05/00 | 2.7 | -11.2 | | | | | |
| 11 | 2378 | 06/05/00 | 6.7 | 6.1 | | | | | |
| 12 | 2378 | 06/05/00 | 6.0 | 3.1 | | | | | |
| 13 | 2378 | 06/05/00 | 6.7 | 6.1 | | | | | |
| 14 | 2378 | 06/05/00 | 5.3 | 0.1 | | | | | |
| 15 | 2378 | 06/05/00 | 4.0 | -5.6 | | | | | |
| | | | | MIN | | | | | |
| | | | | MAX | | | | | |
| | | | | MEAN | | | | | |
| | | | | SD | | | | | |
| | | | | Transuranic DCG _{low} | | | | | |
| | | | | -11.2 | | | | | |
| | | | | 29.2 | | | | | |
| | | | | 3.4 | | | | | |
| | | | | 9.9 | | | | | |
| | | | | 100 | | | | | |

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Survey Unit 771002 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|--------------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1072 | 6/5/00 | 0.0 | -1.2 |
| 2 | 844 | 6/5/00 | 0.0 | -1.5 |
| 3 | 1406 | 6/5/00 | 0.0 | -0.9 |
| 4 | 1178 | 6/5/00 | 0.5 | 0.3 |
| 5 | 845 | 6/5/00 | 0.0 | -0.9 |
| 6 | 1072 | 6/5/00 | 0.0 | -1.2 |
| 7 | 844 | 6/5/00 | 0.5 | 0.0 |
| 8 | 1406 | 6/5/00 | 0.5 | 0.6 |
| 9 | 1178 | 6/5/00 | 0.0 | -1.2 |
| 10 | 845 | 6/5/00 | 0.5 | 0.6 |
| 11 | 1072 | 6/5/00 | 0.0 | -1.2 |
| 12 | 844 | 6/5/00 | 0.5 | 0.0 |
| 13 | 1406 | 6/5/00 | 0.0 | -0.9 |
| 14 | 1178 | 6/5/00 | 0.0 | -1.2 |
| 15 | 845 | 6/5/00 | 0.5 | 0.6 |
| | | | MIN | -1.5 |
| | | | MAX | 0.6 |
| | | | MEAN | -0.5 |
| | | | SD | 0.8 |
| | | | Transuranic DCG _{LW} | 20 |

ATTACHMENT C

Survey Unit 771003 Data Summary

SURVEY UNIT 771003 DATA

Survey Unit 7710u3 Data Summary

Total Surface Activity Measurements

| 15 | 15 |
|-----------------|-----------------|
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX 11.6 dpm/100 cm²
 MEAN 3.2 dpm/100 cm²
 STD DEV 6.2 dpm/100 cm²

TRANSURANIC
 DCGL_w

100 dpm/100 cm²

Removable Activity Measurements

| 15 | 15 |
|-----------------|-----------------|
| Number Required | Number Obtained |

MIN -1.5 dpm/100 cm²
 MAX 0.6 dpm/100 cm²
 MEAN -0.6 dpm/100 cm²
 STD DEV 0.8 dpm/100 cm²

TRANSURANIC
 DCGL_w

20 dpm/100 cm²

Survey Unit 771003 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------------------|------------------------------|----------|-------|----------|-----------------------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Blvd (cpm) | NE Electra w/ DP6 Probe | Local Area Blvd (cpm) | Serial # | Date | (cpm) | Serial # | Local Area Blvd (cpm) |
| Instrument # | 2376 | N/A | N/A | 4.3 | 2376 | N/A | N/A | 2376 | 3.0 |
| Cal. Due Date | 10/10/00 | N/A | N/A | | 11/1/00 | N/A | N/A | 11/1/00 | |
| Efficiency (c/d) | 0.21 | N/A | N/A | | 0.23 | N/A | N/A | 0.23 | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm²) | Serial # | Date | (cpm) | Serial # | (dpm/100 cm²) |
| 1 | 2376 | 06/05/00 | 6.0 | 8.3 | | | | | |
| 2 | 2376 | 06/05/00 | 3.3 | -4.6 | | | | | |
| 3 | 2376 | 06/05/00 | 3.3 | -4.6 | | | | | |
| 4 | 2376 | 06/05/00 | 4.0 | -1.2 | 2376 | 06/05/00 | 4.7 | 2376 | 7.4 |
| 5 | 2376 | 06/05/00 | 5.3 | 5.0 | 2376 | 06/05/00 | 4.0 | 2376 | 4.3 |
| 6 | 2376 | 06/05/00 | 6.0 | 8.3 | | | | | |
| 7 | 2376 | 06/05/00 | 6.7 | 11.6 | | | | | |
| 8 | 2376 | 06/05/00 | 3.3 | -4.6 | | | | | |
| 9 | 2376 | 06/05/00 | 4.7 | 2.1 | | | | | |
| 10 | 2376 | 06/05/00 | 6.0 | 8.3 | | | | | |
| 11 | 2376 | 06/05/00 | 3.3 | -4.6 | | | | | |
| 12 | 2376 | 06/05/00 | 6.0 | 8.3 | | | | | |
| 13 | 2376 | 06/05/00 | 5.3 | 5.0 | | | | | |
| 14 | 2376 | 06/05/00 | 6.7 | 11.6 | | | | | |
| 15 | 2376 | 06/05/00 | 4.0 | -1.2 | | | | | |
| | | | | MIN | | | | | |
| | | | | MAX | | | | | |
| | | | | MEAN | | | | | |
| | | | | SD | | | | | |
| | | | | Transmittance DOGL ₄₀₀ | | | | | |
| | | | | 100 | | | | | |

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Survey Unit 771003 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1072 | 6/5/00 | 0.5 | 0.3 |
| 2 | 844 | 6/5/00 | 0.0 | -1.5 |
| 3 | 1406 | 6/5/00 | 0.0 | -0.9 |
| 4 | 1178 | 6/5/00 | 0.0 | -1.2 |
| 5 | 845 | 6/5/00 | 0.5 | 0.6 |
| 6 | 1072 | 6/5/00 | 0.5 | 0.3 |
| 7 | 844 | 6/5/00 | 0.0 | -1.5 |
| 8 | 1406 | 6/5/00 | 0.0 | -0.9 |
| 9 | 1178 | 6/5/00 | 0.0 | -1.2 |
| 10 | 845 | 6/5/00 | 0.0 | 0.0 |
| 11 | 1072 | 6/5/00 | 0.0 | -0.9 |
| 12 | 844 | 6/5/00 | 0.5 | 0.0 |
| 13 | 1406 | 6/5/00 | 0.0 | -0.9 |
| 14 | 1178 | 6/5/00 | 0.5 | -1.2 |
| 15 | 845 | 6/5/00 | 0.0 | 0.6 |
| | | | MIN | 0.6 |
| | | | MAX | -1.5 |
| | | | MEAN | 0.6 |
| | | | SD | -0.6 |
| | | | Transuranic DCG _{LW} | 0.8 |
| | | | | 20 |

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ATTACHMENT D

Survey Unit 771004 Data Summary

SURVEY UNIT 771004 DATA

Survey Unit 771004 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | | |
|---------|------|-------------------------|
| MIN | -5.6 | dpm/100 cm ² |
| MAX | 13.5 | dpm/100 cm ² |
| MEAN | 2.0 | dpm/100 cm ² |
| STD DEV | 5.3 | dpm/100 cm ² |

| | | |
|----------------------------------|-----|-------------------------|
| TRANSURANIC DCGL _w | 100 | dpm/100 cm ² |
|----------------------------------|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | | |
|---------|------|-------------------------|
| MIN | -1.8 | dpm/100 cm ² |
| MAX | 1.5 | dpm/100 cm ² |
| MEAN | -0.5 | dpm/100 cm ² |
| STD DEV | 0.8 | dpm/100 cm ² |

| | | |
|----------------------------------|----|-------------------------|
| TRANSURANIC DCGL _w | 20 | dpm/100 cm ² |
|----------------------------------|----|-------------------------|

Survey Unit 771004 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|----------|-----------------------|-----------------------------------|------------------------------|----------|-----------------------|----------------------------|
| Meter Model: | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument #: | 2379 | N/A | N/A | 4.5 | 1265 | N/A | N/A | 17 |
| Cal. Due Date | 8/9/00 | N/A | N/A | | 9/29/00 | N/A | N/A | |
| Efficiency (cid) | 0.21 | N/A | N/A | | 0.20 | N/A | N/A | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) |
| 1 | 2379 | 08/01/00 | 3.3 | -5.6 | 1265 | 08/01/00 | 3.0 | 6.5 |
| 2 | 2379 | 08/01/00 | 6.0 | 7.3 | | | | |
| 3 | 2379 | 08/01/00 | 4.7 | 1.1 | | | | |
| 4 | 2379 | 08/01/00 | 6.0 | 7.3 | | | | |
| 5 | 2379 | 08/01/00 | 4.7 | 1.1 | | | | |
| 6 | 2379 | 08/01/00 | 3.3 | -5.6 | | | | |
| 7 | 2379 | 08/01/00 | 5.3 | 3.9 | | | | |
| 8 | 2379 | 08/01/00 | 4.7 | 1.1 | | | | |
| 9 | 2379 | 08/01/00 | 4.0 | -2.3 | | | | |
| 10 | 2379 | 08/01/00 | 5.3 | 3.9 | | | | |
| 11 | 2379 | 08/01/00 | 4.7 | 1.1 | | | | |
| 12 | 2379 | 08/01/00 | 7.3 | 13.5 | 1265 | 08/01/00 | 3.0 | 6.5 |
| 13 | 2379 | 08/01/00 | 4.0 | -2.3 | | | | |
| 14 | 2379 | 08/01/00 | 6.0 | 7.3 | | | | |
| 15 | 2379 | 08/01/00 | 4.0 | -2.3 | | | | |
| | | | | MIN | -5.6 | | | |
| | | | | MAX | 13.5 | | | |
| | | | | MEAN | 2.0 | | | |
| | | | | SD | 5.3 | | | |
| | | | | Transmittance DOGL ₄₀₀ | 100 | | | |

Best Available Copy

Survey Unit 771004 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1053 | 6/1/00 | 0 0 | -0.6 |
| 2 | 1351 | 6/1/00 | 0 0 | -1.8 |
| 3 | 888 | 6/1/00 | 0 0 | 0.0 |
| 4 | 754 | 6/1/00 | 0 0 | 0.0 |
| 5 | 1201 | 6/1/00 | 0 0 | -0.9 |
| 6 | 1053 | 6/1/00 | 0 0 | -0.6 |
| 7 | 1351 | 6/1/00 | 0 5 | -0.3 |
| 8 | 888 | 6/1/00 | 0 0 | 0.0 |
| 9 | 754 | 6/1/00 | 0 5 | 1.5 |
| 10 | 1201 | 6/1/00 | 0 0 | -0.9 |
| 11 | 1053 | 6/1/00 | 0 0 | -0.6 |
| 12 | 1351 | 6/1/00 | 0 0 | -1.8 |
| 13 | 888 | 6/1/00 | 0 0 | 0.0 |
| 14 | 754 | 6/1/00 | 0 0 | 0.0 |
| 15 | 1201 | 6/1/00 | 0 0 | -0.9 |
| | | | MIN | -1.8 |
| | | | MAX | 1.5 |
| | | | MEAN | -0.5 |
| | | | SD | 0.8 |
| | | | Transuranic DCG _{LW} | 20 |

ATTACHMENT E

Survey Unit 771005 Data Summary

SURVEY UNIT 771005 DATA

Survey Unit 771005 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| |
|-----|
| 100 |
|-----|

dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| |
|----|
| 20 |
|----|

dpm/100 cm²

Survey Unit 771005 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------|-----------------------------------|------------------------------|-----------------------|-------------------------|----------------------------|-----------------------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | Local Area Blgd (cpm) |
| Instrument #: | 2379 | 1670 | N/A | 2.2 | 2379 | 1670 | N/A | 2.0 | 2.0 |
| Cal. Due Date: | 8/9/00 | 9/30/00 | N/A | | 8/9/00 | 9/30/00 | N/A | | |
| Efficiency (cts) | 0.21 | 0.22 | N/A | | 0.21 | 0.22 | N/A | | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 2379 | 05/31/00 | 2.0 | -1.1 | | | | | |
| 2 | 1670 | 05/31/00 | 3.3 | 4.9 | | | | | |
| 3 | 1670 | 05/31/00 | 3.3 | 4.9 | | | | | |
| 4 | 2379 | 05/31/00 | 3.3 | 5.1 | | | | | |
| 5 | 2379 | 05/31/00 | 1.3 | -4.4 | | | | | |
| 6 | 2379 | 05/31/00 | 3.3 | 5.1 | | | | | |
| 7 | 2379 | 05/31/00 | 2.7 | 2.3 | | | | | |
| 8 | 2379 | 05/31/00 | 6.0 | 18.0 | 1670 | 05/31/00 | 6.0 | 18.2 | |
| 9 | 2379 | 05/31/00 | 2.0 | -1.1 | | | | | |
| 10 | 1670 | 05/31/00 | 2.7 | 2.2 | | | | | |
| 11 | 1670 | 05/31/00 | 2.0 | -1.0 | | | | | |
| 12 | 1670 | 05/31/00 | 1.3 | -4.2 | | | | | |
| 13 | 2379 | 05/31/00 | 2.7 | 2.3 | | | | | |
| 14 | 1670 | 05/31/00 | 1.3 | -4.2 | | | | | |
| 15 | 1670 | 05/31/00 | 4.7 | 11.2 | 2379 | 05/31/00 | 0.7 | -4.2 | |
| | | | | MIN | | | | | |
| | | | | MAX | | | | | |
| | | | | MEAN | | | | | |
| | | | | SD | | | | | |
| | | | | Transmittance DOGL ₄₀₀ | | | | | |
| | | | | -4.4 | | | | | |
| | | | | 18.0 | | | | | |
| | | | | 2.7 | | | | | |
| | | | | 6.1 | | | | | |
| | | | | 100 | | | | | |

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Survey Unit 771005 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1053 | 5/31/00 | 0.0 | -1.2 |
| 2 | 1351 | 5/31/00 | 0.0 | -1.8 |
| 3 | 888 | 5/31/00 | 0.5 | 0.9 |
| 4 | 754 | 5/31/00 | 0.0 | 0.0 |
| 5 | 1201 | 5/31/00 | 0.0 | -0.6 |
| 6 | 1053 | 5/31/00 | 0.0 | -1.2 |
| 7 | 1351 | 5/31/00 | 0.5 | -0.3 |
| 8 | 888 | 5/31/00 | 0.0 | -0.6 |
| 9 | 754 | 5/31/00 | 0.0 | 0.0 |
| 10 | 1201 | 5/31/00 | 0.5 | 0.9 |
| 11 | 1053 | 5/31/00 | 0.5 | 0.3 |
| 12 | 1351 | 5/31/00 | 0.0 | -1.8 |
| 13 | 888 | 5/31/00 | 0.5 | 0.9 |
| 14 | 754 | 5/31/00 | 0.0 | 0.0 |
| 15 | 1201 | 5/31/00 | 1.0 | 2.4 |
| | | | MIN | -1.8 |
| | | | MAX | 2.4 |
| | | | MEAN | -0.1 |
| | | | SD | 1.2 |
| | | | Transuranic DCG _{LW} | 20 |

Best Available Copy

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ATTACHMENT F

Survey Unit 771006 Data Summary

SURVEY UNIT 771006 DATA

Survey Unit 771006 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|------|-------------------------|
| -5.0 | dpm/100 cm ² |
| 48.8 | dpm/100 cm ² |
| 7.0 | dpm/100 cm ² |
| 12.3 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|-----|-------------------------|
| 100 | dpm/100 cm ² |
|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|------|-------------------------|
| -0.9 | dpm/100 cm ² |
| 1.5 | dpm/100 cm ² |
| -0.1 | dpm/100 cm ² |
| 0.7 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|----|-------------------------|
| 20 | dpm/100 cm ² |
|----|-------------------------|

Survey Unit 771006 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|----------|-----------------------|--------------------------------|------------------------------|----------|-----------------------|----------------------------|
| Meter Model: | NE Electra w/ DP6 Probe | | Local Area Blgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Blgd (cpm) | |
| Instrument #: | 2379 | N/A | N/A | 3.1 | 1265 | N/A | N/A | 1.5 |
| Cal. Due Date: | 6/9/00 | N/A | N/A | | 9/29/00 | N/A | N/A | |
| Efficiency (c/d): | 0.21 | N/A | N/A | | 0.20 | N/A | N/A | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) |
| 1 | 2379 | 06/01/00 | 13.3 | 48.8 | 1265 | 06/01/00 | 11.3 | 49.9 |
| 2 | 2379 | 06/01/00 | 3.3 | 1.1 | | | | |
| 3 | 2379 | 06/01/00 | 2.0 | -5.0 | | | | |
| 4 | 2379 | 06/01/00 | 4.0 | 4.5 | | | | |
| 5 | 2379 | 06/01/00 | 4.7 | 7.8 | | | | |
| 6 | 2379 | 06/01/00 | 5.3 | 10.7 | | | | |
| 7 | 2379 | 06/01/00 | 4.0 | 4.5 | | | | |
| 8 | 2379 | 06/01/00 | 4.7 | 7.8 | | | | |
| 9 | 2379 | 06/01/00 | 3.3 | 1.1 | | | | |
| 10 | 2379 | 06/01/00 | 4.0 | 4.5 | | | | |
| 11 | 2379 | 06/01/00 | 4.0 | 4.5 | | | | |
| 12 | 2379 | 06/01/00 | 2.7 | -1.7 | | | | |
| 13 | 2379 | 06/01/00 | 4.0 | 4.5 | | | | |
| 14 | 2379 | 06/01/00 | 5.3 | 10.7 | | | | |
| 15 | 2379 | 06/01/00 | 3.3 | 1.1 | 1265 | 06/01/00 | 2.0 | 2.5 |
| | | | | MIN | | | | |
| | | | | MAX | | | | |
| | | | | MEAN | | | | |
| | | | | SD | | | | |
| | | | | Transuranic DCG _{low} | | | | |
| | | | | -5.0 | | | | |
| | | | | 48.8 | | | | |
| | | | | 7.0 | | | | |
| | | | | 12.3 | | | | |
| | | | | 100 | | | | |

Best Available Copy

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Survey Unit 771006 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1053 | 6/1/00 | 0.0 | -0.6 |
| 2 | 1351 | 6/1/00 | 1.0 | 1.2 |
| 3 | 888 | 6/1/00 | 0.0 | 0.0 |
| 4 | 754 | 6/1/00 | 0.0 | 0.0 |
| 5 | 1201 | 6/1/00 | 0.0 | -0.9 |
| 6 | 1053 | 6/1/00 | 0.0 | -0.6 |
| 7 | 1351 | 6/1/00 | 0.5 | -0.3 |
| 8 | 888 | 6/1/00 | 0.0 | 0.0 |
| 9 | 754 | 6/1/00 | 0.0 | 0.0 |
| 10 | 1201 | 6/1/00 | 0.5 | 0.6 |
| 11 | 1053 | 6/1/00 | 0.0 | -0.6 |
| 12 | 1351 | 6/1/00 | 0.5 | -0.3 |
| 13 | 888 | 6/1/00 | 0.0 | 0.0 |
| 14 | 754 | 6/1/00 | 0.5 | 1.5 |
| 15 | 1201 | 6/1/00 | 0.0 | -0.9 |
| | | | MIN | -0.9 |
| | | | MAX | 1.5 |
| | | | MEAN | -0.1 |
| | | | SD | 0.7 |
| | | | Transuranic DCG _{Lw} | 20 |

90

ATTACHMENT G

Survey Unit 771007 Data Summary

SURVEY UNIT 771007 DATA

Survey Unit 771007 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | | |
|---------|-------|-------------------------|
| MIN | -13.3 | dpm/100 cm ² |
| MAX | 21.5 | dpm/100 cm ² |
| MEAN | 3.8 | dpm/100 cm ² |
| STD DEV | 9.7 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| |
|-----|
| 100 |
|-----|

dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | | |
|---------|------|-------------------------|
| MIN | -1.2 | dpm/100 cm ² |
| MAX | 3.0 | dpm/100 cm ² |
| MEAN | -0.1 | dpm/100 cm ² |
| STD DEV | 1.3 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| |
|----|
| 20 |
|----|

dpm/100 cm²

Survey Unit 771007 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|----------|-----------------------|----------------------------|------------------------------|----------|-----------------------|----------------------------|--|
| Meter Model | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | | |
| Instrument # | 2378 | N/A | N/A | 5.8 | 2375 | N/A | N/A | 6.8 | |
| Cal. Due Date | 11/1/00 | N/A | N/A | | 10/10/00 | N/A | N/A | | |
| Efficiency (c/d) | 0.23 | N/A | N/A | | 0.21 | N/A | N/A | | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 2378 | 06/02/00 | 6.7 | 4.1 | | | | | |
| 2 | 2378 | 06/02/00 | 4.7 | -4.6 | | | | | |
| 3 | 2378 | 06/02/00 | 10.0 | 18.4 | 2375 | 06/02/00 | 8.0 | 10.5 | |
| 4 | 2378 | 06/02/00 | 7.3 | 6.7 | | | | | |
| 5 | 2378 | 06/02/00 | 2.7 | -13.3 | | | | | |
| 6 | 2378 | 06/02/00 | 4.0 | -7.7 | | | | | |
| 7 | 2378 | 06/02/00 | 6.0 | 1.0 | | | | | |
| 8 | 2378 | 06/02/00 | 6.7 | 12.8 | | | | | |
| 9 | 2378 | 06/02/00 | 7.3 | 6.7 | | | | | |
| 10 | 2378 | 06/02/00 | 6.0 | 1.0 | | | | | |
| 11 | 2378 | 06/02/00 | 7.3 | 6.7 | | | | | |
| 12 | 2378 | 06/02/00 | 8.0 | 9.7 | | | | | |
| 13 | 2378 | 06/02/00 | 10.7 | 21.8 | 2375 | 06/02/00 | 7.3 | 7.1 | |
| 14 | 2378 | 06/02/00 | 4.0 | -7.7 | | | | | |
| 15 | 2378 | 06/02/00 | 6.0 | 1.0 | | | | | |
| | | | | MIN | | | | | |
| | | | | -13.3 | | | | | |
| | | | | MAX | | | | | |
| | | | | 21.8 | | | | | |
| | | | | MEAN | | | | | |
| | | | | 3.8 | | | | | |
| | | | | SD | | | | | |
| | | | | 9.7 | | | | | |
| | | | | Transuranic DCGM | | | | | |
| | | | | 100 | | | | | |

924

Survey Unit 771007 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1072 | 6/2/00 | 0.0 | -0.9 |
| 2 | 844 | 6/2/00 | 0.5 | 0.9 |
| 3 | 1406 | 6/2/00 | 0.5 | 1.5 |
| 4 | 1178 | 6/2/00 | 0.0 | -1.2 |
| 5 | 845 | 6/2/00 | 0.0 | -0.9 |
| 6 | 1072 | 6/2/00 | 0.5 | 0.6 |
| 7 | 844 | 6/2/00 | 0.0 | -0.6 |
| 8 | 1406 | 6/2/00 | 1.0 | 3.0 |
| 9 | 1178 | 6/2/00 | 0.0 | -1.2 |
| 10 | 845 | 6/2/00 | 0.0 | -0.9 |
| 11 | 1072 | 6/2/00 | 0.0 | -0.9 |
| 12 | 844 | 6/2/00 | 0.0 | -0.6 |
| 13 | 1406 | 6/2/00 | 0.5 | 1.5 |
| 14 | 1178 | 6/2/00 | 0.0 | -1.2 |
| 15 | 845 | 6/2/00 | 0.0 | -0.9 |
| | | | MIN | -1.2 |
| | | | MAX | 3.0 |
| | | | MEAN | -0.1 |
| | | | SD | 1.3 |
| | | | Transuranic DCG _{LW} | 20 |

ATTACHMENT H

Survey Unit 771008 Data Summary

SURVEY UNIT 771008 DATA

Survey Unit 771008 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | | |
|----------------------------------|-----|-------------------------|
| TRANSURANIC DCGL _w | 100 | dpm/100 cm ² |
|----------------------------------|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | | |
|---------|------|-------------------------|
| MIN | -1.8 | dpm/100 cm ² |
| MAX | 7.3 | dpm/100 cm ² |
| MEAN | 0.0 | dpm/100 cm ² |
| STD DEV | 2.1 | dpm/100 cm ² |

| | | |
|----------------------------------|----|-------------------------|
| TRANSURANIC DCGL _w | 20 | dpm/100 cm ² |
|----------------------------------|----|-------------------------|

| Survey Unit 771008 Total Surface Contamination Results | | | | | | | | | |
|--|----------------|-------------------------|-----------------------|----------------------------|------------------------|-----------------------|-----------------------|----------------------------|-----------------------|
| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
| Meter Model | Instrument # | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | Local Area Bkgd (cpm) | Local Area Bkgd (cpm) | Local Area Bkgd (cpm) | Local Area Bkgd (cpm) |
| Cal. Due Date: | Efficiency (%) | 2379 | N/A | 2379 | N/A | 2379 | N/A | 2379 | N/A |
| Cal. Due Date: | Efficiency (%) | 8/20/00 | N/A | 8/20/00 | N/A | 8/20/00 | N/A | 8/20/00 | N/A |
| Cal. Due Date: | Efficiency (%) | 0.21 | N/A | 0.21 | N/A | 0.21 | N/A | 0.21 | N/A |
| Total Surface Activity Measurements | | | | | | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # |
| 1 | 2379 | 05/31/00 | 4.7 | 7.4 | 1670 | 05/31/00 | 3.3 | 5.9 | 2379 |
| 2 | 2379 | 05/31/00 | 6.0 | 13.3 | 1670 | 05/31/00 | 1.3 | 4.3 | 2379 |
| 3 | 1670 | 05/31/00 | 3.3 | 1.1 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 4 | 2379 | 05/31/00 | 4.0 | 4.2 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 5 | 1670 | 05/31/00 | 3.3 | 1.1 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 6 | 1670 | 05/31/00 | 8.3 | 10.2 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 7 | 1670 | 05/31/00 | 3.3 | 1.1 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 8 | 2379 | 05/31/00 | 2.0 | 4.8 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 9 | 2379 | 05/31/00 | 3.3 | 1.1 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 10 | 2379 | 05/31/00 | 2.0 | 4.8 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 11 | 1670 | 05/31/00 | 4.7 | 7.4 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 12 | 2379 | 05/31/00 | 1.3 | 4.2 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 13 | 1670 | 05/31/00 | 4.0 | 4.2 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 14 | 1670 | 05/31/00 | 2.0 | 4.8 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| 15 | 1670 | 05/31/00 | 4.7 | 7.4 | 1670 | 05/31/00 | 1.1 | 1.1 | 1670 |
| | | | | MIN | | | | | MIN |
| | | | | MAX | | | | | MAX |
| | | | | MEAN | | | | | MEAN |
| | | | | SD | | | | | SD |
| | | | | Transuranic DCG | | | | | Transuranic DCG |

Best Available Copy

Survey Unit 771008 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1053 | 5/31/00 | 00 | -1.2 |
| 2 | 1351 | 5/31/00 | 00 | -1.8 |
| 3 | 888 | 5/31/00 | 00 | -0.6 |
| 4 | 754 | 5/31/00 | 00 | 0.0 |
| 5 | 1201 | 5/31/00 | 00 | -0.6 |
| 6 | 1053 | 5/31/00 | 00 | -1.2 |
| 7 | 1351 | 5/31/00 | 30 | 7.3 |
| 8 | 888 | 5/31/00 | 00 | -0.6 |
| 9 | 754 | 5/31/00 | 00 | 0.0 |
| 10 | 1201 | 5/31/00 | 00 | -0.6 |
| 11 | 1053 | 5/31/00 | 00 | -1.2 |
| 12 | 1351 | 5/31/00 | 05 | -0.3 |
| 13 | 888 | 5/31/00 | 00 | -0.6 |
| 14 | 754 | 5/31/00 | 00 | 0.0 |
| 15 | 1201 | 5/31/00 | 05 | 0.9 |
| | | | MIN | -1.8 |
| | | | MAX | 7.3 |
| | | | MEAN | 0.0 |
| | | | SD | 2.1 |
| | | | Transuranic DCG _{LW} | 20 |

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ATTACHMENT I

Survey Unit 771009 Data Summary

SURVEY UNIT 771009 DATA

Survey Unit 771009 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | | |
|----------------------------------|-----|-------------------------|
| TRANSURANIC DCGL _w | 100 | dpm/100 cm ² |
|----------------------------------|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | | |
|---------|------|-------------------------|
| MIN | -1.2 | dpm/100 cm ² |
| MAX | 2.1 | dpm/100 cm ² |
| MEAN | -0.2 | dpm/100 cm ² |
| STD DEV | 1.0 | dpm/100 cm ² |

| | | |
|----------------------------------|----|-------------------------|
| TRANSURANIC DCGL _w | 20 | dpm/100 cm ² |
|----------------------------------|----|-------------------------|

Survey Unit 771009 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | | | |
|-------------------------------------|-------------------------|----------|-------|--------------------------------|----------|-------------------------|-------|----------------------------|-----|
| Meter Model: | NE Electra w/ DP6 Probe | | | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument #: | 2379 | 1364 | N/A | 3.0 | | 1272 | N/A | N/A | 2.5 |
| Cal. Due Date: | 9/9/00 | 9/30/00 | N/A | | | 11/1/00 | N/A | N/A | |
| Efficiency (cld) | 0.21 | 0.20 | N/A | | | 0.22 | N/A | N/A | |
| Total Surface Activity Measurements | | | | | | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 2379 | 08/08/00 | 4.7 | 8.1 | | | | | |
| 2 | 2379 | 08/08/00 | 3.3 | 1.4 | | | | | |
| 3 | 2379 | 08/08/00 | 2.7 | -1.4 | | | | | |
| 4 | 2379 | 08/08/00 | 4.0 | 4.8 | | | | | |
| 5 | 2379 | 08/08/00 | 3.3 | 1.4 | | | | | |
| 6 | 2379 | 08/08/00 | 5.3 | 11.0 | | | | | |
| 7 | 1364 | 08/12/00 | 4.0 | 5.0 | | | | | |
| 8 | 2379 | 08/08/00 | 3.3 | 1.4 | | | | | |
| 9 | 1364 | 08/12/00 | 6.0 | 15.0 | | | | | |
| 10 | 1364 | 08/12/00 | 6.7 | 18.5 | 1272 | 08/12/00 | 3.7 | 8.5 | |
| 11 | 1364 | 08/12/00 | 6.0 | 15.0 | 1272 | 08/12/00 | 4.0 | 8.5 | |
| 12 | 1364 | 08/12/00 | 5.7 | 13.5 | | | | | |
| 13 | 1364 | 08/12/00 | 3.3 | 1.5 | | | | | |
| 14 | 2379 | 08/08/00 | 2.0 | -4.8 | | | | | |
| 15 | 2379 | 08/08/00 | 2.0 | -4.8 | | | | | |
| | | | | MIN | -4.8 | | | | |
| | | | | MAX | 18.5 | | | | |
| | | | | MEAN | 5.7 | | | | |
| | | | | SD | 7.4 | | | | |
| | | | | Transuranic DCG _{avg} | 100 | | | | |

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Survey Unit 771009 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1053 | 6/12/00 | 0 0 | -1.2 |
| 2 | 1351 | 6/12/00 | 0 5 | 0.6 |
| 3 | 888 | 6/12/00 | 0 5 | 1.2 |
| 4 | 754 | 6/12/00 | 0 0 | -0.6 |
| 5 | 1201 | 6/12/00 | 0 0 | -0.3 |
| 6 | 1053 | 6/12/00 | 0 0 | -1.2 |
| 7 | 1351 | 6/12/00 | 1 0 | 2.1 |
| 8 | 888 | 6/12/00 | 0 0 | -0.3 |
| 9 | 754 | 6/12/00 | 0 0 | -0.6 |
| 10 | 1201 | 6/12/00 | 0 5 | 1.2 |
| 11 | 1053 | 6/12/00 | 0 0 | -1.2 |
| 12 | 1351 | 6/12/00 | 0 0 | -0.9 |
| 13 | 888 | 6/12/00 | 0 0 | -0.3 |
| 14 | 754 | 6/12/00 | 0 0 | -0.6 |
| 15 | 1201 | 6/12/00 | 0 0 | -0.3 |
| | | | MIN | -1.2 |
| | | | MAX | 2.1 |
| | | | MEAN | -0.2 |
| | | | SD | 1.0 |
| | | | Transuranic DCGlw | 20 |

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ATTACHMENT J

Survey Unit 771010 Data Summary

SURVEY UNIT 771010 DATA

Survey Unit 771010 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX 38.6 dpm/100 cm²
 MEAN 17.5 dpm/100 cm²
 STD DEV 12.1 dpm/100 cm²

TRANSURANIC
 DCGL_w 100 dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN -1.2 dpm/100 cm²
 MAX 7.9 dpm/100 cm²
 MEAN 1.4 dpm/100 cm²
 STD DEV 2.8 dpm/100 cm²

TRANSURANIC
 DCGL_w 20 dpm/100 cm²

Survey Unit 771010 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | | | | | |
|-------------------------------------|-------------------------|----------|--------|------------------------------|-----------------------|----------|-------------------------|----------------------------|-----|
| Meter Model: | NE Electra w/ DP6 Probe | | | | Local Area Bkgd (cpm) | | Quality Control Survey | | |
| Instrument # | 2379 | 2375 | 2138 | 2138 | 31 | 76 | NE Electra w/ DP6 Probe | | |
| Cal. Due Date: | 1/26/01 | 1/10/01 | 3/8/01 | 3/8/01 | | | 2379 | N/A | N/A |
| Efficiency (old) | 0.22 | 0.22 | 0.22 | 0.22 | | | 1/26/00 | N/A | N/A |
| | 0.22 | | | | | | 0.22 | N/A | N/A |
| Total Surface Activity Measurements | | | | | | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1* | 2138 | 10/04/00 | 13.3 | 28.2 | | | | | |
| 2* | 2138 | 10/04/00 | 14.0 | 29.4 | | | | | |
| 3 | 2379 | 08/24/00 | 4.7 | 7.1 | 2379 | 10/09/00 | 16.0 | 16.6 | |
| 4 | 2375 | 08/25/00 | 6.0 | 12.9 | | | | | |
| 5* | 2138 | 10/04/00 | 14.0 | 29.4 | | | | | |
| 6* | 2138 | 10/04/00 | 18.0 | 38.8 | | | | | |
| 7 | 2379 | 08/24/00 | 8.7 | 25.0 | 2379 | 10/09/00 | 19.3 | 29.7 | |
| 8* | 2138 | 10/04/00 | 12.7 | 23.5 | | | | | |
| 9 | 2379 | 08/24/00 | 9.3 | 27.7 | | | | | |
| 10 | 2379 | 08/24/00 | 6.0 | 12.9 | | | | | |
| 11* | 2138 | 10/04/00 | 9.3 | 8.0 | | | | | |
| 12* | 2138 | 10/04/00 | 6.0 | -7.1 | | | | | |
| 13* | 2138 | 10/04/00 | 9.3 | 8.0 | | | | | |
| 14 | 2375 | 08/25/00 | 6.0 | 12.9 | | | | | |
| 15* | 2138 | 10/04/00 | 9.3 | 8.0 | | | | | |
| | | | | MIN | | | | | |
| | | | | MAX | | | | | |
| | | | | MEAN | | | | | |
| | | | | SD | | | | | |
| | | | | Transuranic DCL _W | | | | | |
| | | | | | 100 | | | | |

• Locations were relocated from the roof to the trailer exterior Initial results were elevated (>100 dpm/100 cm²) due to Co-60

* Locations were relocated from the roof to the trailer exterior Initial results were elevated (>100 dpm/100 cm²) due to Po-210 (presented on Page 4 of 5 of this Data Summary)

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Survey Unit 771010 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------------|------------------------------|----------|-----------------------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument #: | 2379 | N/A | 3.1 | 2375 | N/A | N/A | 3.5 |
| Cal. Due Date: | 1/26/01 | N/A | | 1/10/01 | N/A | N/A | |
| Efficiency (c/d) | 0.22 | N/A | | 0.224 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1 | 2379 | 08/24/00 | 37.3 | 152.9 | | | |
| 2 | 2375 | 08/25/00 | 31.3 | 125.6 | | | |
| 5 | 2379 | 08/24/00 | 14.0 | 48.7 | | | |
| 6 | 2379 | 08/24/00 | 33.3 | 135.0 | | | |
| 8 | 2375 | 08/25/00 | 16.0 | 57.5 | | | |
| 11 | 2379 | 08/24/00 | 28.7 | 114.4 | | | |
| 12 | 2379 | 08/24/00 | 39.3 | 161.8 | 2375 | 08/25/00 | 37.0 |
| 13 | 2379 | 08/24/00 | 51.3 | 215.4 | 2375 | 08/25/00 | 48.3 |
| 15 | 2379 | 08/24/00 | 34.7 | 141.2 | | | |
| | | | MIN | 48.7 | | | |
| | | | MAX | 215.4 | | | |
| | | | MEAN | 128.1 | | | |
| | | | SD | 51.3 | | | |
| | | | Transuranic DCGL ^W | 100 | | | |

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Survey Unit 771010 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|----------------|-------------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) |
| 1 | 1052 | 10/6/00 | 60 | 30 |
| 2 | 1351 | 10/6/00 | 40 | 20 |
| 3 | 845 | 8/10/00 | 00 | 00 |
| 4 | 850 | 8/10/00 | 10 | 05 |
| 5 | 1354 | 10/6/00 | 20 | 10 |
| 6 | 1052 | 10/6/00 | 40 | 20 |
| 7 | 845 | 8/10/00 | 10 | 05 |
| 8 | 1351 | 10/6/00 | 00 | 00 |
| 9 | 845 | 8/10/00 | 10 | 05 |
| 10 | 850 | 10/6/00 | 00 | 00 |
| 11 | 1354 | 10/6/00 | 10 | 05 |
| 12 | 1052 | 10/6/00 | 00 | 00 |
| 13 | 1351 | 10/6/00 | 40 | 20 |
| 14 | 850 | 8/10/00 | 10 | 05 |
| 15 | 1354 | 10/6/00 | 00 | 00 |
| | | | | MIN |
| | | | | MAX |
| | | | | MEAN |
| | | | | SD |
| | | | | Transuranic DCG _{LW} |
| | | | | 20 |

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ATTACHMENT K

Survey Unit 771011 Data Summary

SURVEY UNIT 771011 DATA

Survey Unit 771011 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|-------|-------------------------|
| -17.3 | dpm/100 cm ² |
| 50.7 | dpm/100 cm ² |
| 16.3 | dpm/100 cm ² |
| 17.8 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|-----|-------------------------|
| 100 | dpm/100 cm ² |
|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|------|-------------------------|
| -1.8 | dpm/100 cm ² |
| 5.2 | dpm/100 cm ² |
| 0.9 | dpm/100 cm ² |
| 1.9 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|----|-------------------------|
| 20 | dpm/100 cm ² |
|----|-------------------------|

Survey Unit 771011 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|----------|---------------------------------|------------------------------|----------|-----------------------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | | Local Area Blvd (cpm) | NE Electra w/ DP6 Probe | | Local Area Blvd (cpm) | |
| Instrument #: | 2358 | 2375 | 2383 | 2383 | 1285 | N/A | 5.0 |
| Cal. Due Date: | 9/29/00 | 1/10/01 | 1/18/01 | 1/18/01 | 3/29/01 | N/A | |
| Efficiency (adj): | 0.23 | 0.225 | 0.214 | 0.21 | 0.210 | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1 | 2358 | 08/29/00 | 0.0 | -17.3 | | | |
| 2* | 2375 | 10/12/00 | 12.0 | 27.1 | | | |
| 3* | 2375 | 10/12/00 | 6.7 | 3.5 | | | |
| 4 | 2358 | 08/29/00 | 6.0 | 8.9 | | | |
| 5 | 2358 | 08/29/00 | 8.0 | 17.7 | | | |
| 6 | 2358 | 08/29/00 | 6.0 | 8.9 | | | |
| 7 | 2358 | 08/29/00 | 5.3 | 5.9 | | | |
| 8* | 2375 | 10/12/00 | 17.3 | 50.7 | 1285 | 10/18/00 | 9.3 |
| 9 | 2358 | 08/29/00 | 10.0 | 28.4 | | | |
| 10* | 2383 | 10/13/00 | 10.0 | 19.1 | | | |
| 11* | 2383 | 10/13/00 | 13.3 | 34.5 | | | |
| 12 | 2358 | 08/29/00 | 5.3 | 5.9 | | | |
| 13* | 2383 | 10/13/00 | 6.0 | 0.4 | | | |
| 14* | 2383 | 10/13/00 | 15.3 | 43.8 | 2383 | 10/18/00 | 9.3 |
| 15* | 2383 | 10/13/00 | 8.0 | 9.7 | | | |
| | | | MIN | -17.3 | | | |
| | | | MAX | 50.7 | | | |
| | | | MEAN | 16.3 | | | |
| | | | SD | 17.8 | | | |
| | | | Transuranic DCGI _{max} | 100 | | | |

* Locations were relocated from the roof to the trailer exterior Initial results were elevated (>100 dpm/100 cm²) due to Po-210 (presented on Page 4 of 5 of this Data Summary)

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Survey Unit 771011 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------------|------------------------------|----------|-----------------------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Blgd (cpm) | |
| Instrument #: | 2358 | 1259 | N/A | 1262 | N/A | N/A | 4.4 |
| Cal. Due Date | 9/29/00 | 10/4/00 | N/A | 11/17/00 | N/A | N/A | |
| Efficiency (c/d) | 0.23 | 0.207 | N/A | 0.21 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 2 | 2358 | 08/29/00 | 38.0 | 148.7 | 1262 | 08/06/00 | 41.3 |
| 3 | 2358 | 08/29/00 | 37.0 | 144.4 | 1262 | 09/06/00 | 35.0 |
| 8 | 1259 | 09/06/00 | 25.3 | 103.3 | | | |
| 10 | 1259 | 09/06/00 | 28.0 | 116.4 | | | |
| 11 | 1259 | 09/06/00 | 24.0 | 97.0 | | | |
| 13 | 2358 | 08/29/00 | 27.3 | 102.0 | | | |
| 14 | 1259 | 09/06/00 | 9.3 | 25.9 | | | |
| 15 | 1259 | 09/06/00 | 34.7 | 148.8 | | | |
| | | | MIN | 25.9 | | | |
| | | | MAX | 148.8 | | | |
| | | | MEAN | 110.8 | | | |
| | | | SD | 40.7 | | | |
| | | | Transuranic DCG _{LP} | 100 | | | |

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Survey Unit 771011 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|--------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 9/6/00 | 10 | 0.5 | 0.0 |
| 2 | 857 | 10/16/00 | 10 | 0.5 | 0.9 |
| 3 | 888 | 10/16/00 | 20 | 1.0 | 2.4 |
| 4 | 1052 | 9/6/00 | 00 | 0.0 | 1.2 |
| 5 | 844 | 9/6/00 | 10 | 0.5 | -1.8 |
| 6 | 1351 | 9/6/00 | 00 | 0.0 | 1.2 |
| 7 | 1052 | 9/6/00 | 00 | 0.0 | -1.5 |
| 8 | 754 | 10/16/00 | 40 | 2.0 | 5.2 |
| 9 | 1351 | 9/6/00 | 10 | 0.5 | 1.2 |
| 10 | 857 | 10/16/00 | 10 | 0.5 | -0.3 |
| 11 | 888 | 10/16/00 | 10 | 0.5 | 0.9 |
| 12 | 1351 | 9/6/00 | 3.0 | 1.5 | 4.2 |
| 13 | 754 | 10/16/00 | 10 | 0.5 | 0.6 |
| 14 | 857 | 10/16/00 | 10 | 0.5 | -0.3 |
| 15 | 888 | 10/16/00 | 00 | 0.0 | -0.6 |
| | | | | MIN | -1.8 |
| | | | | MAX | 5.2 |
| | | | | MEAN | 0.9 |
| | | | | SD | 1.9 |
| | | | Transuranic DCCGL _w | | |
| | | | 20 | | |

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ATTACHMENT L

Survey Unit 771012 Data Summary

SURVEY UNIT 771012 DATA

Survey Unit 771012 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | |
|----------------------------------|-----------------------------|
| TRANSURANIC DCGL _w | 100 dpm/100 cm ² |
|----------------------------------|-----------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | |
|----------------------------------|----------------------------|
| TRANSURANIC DCGL _w | 20 dpm/100 cm ² |
|----------------------------------|----------------------------|

Survey Unit 771012 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|----------|-------------------------|--------------------------------|----------------------------|------------------------------|----------|-----------------------|----------------------------|--|
| Meter Model: | | NE Electra w/ DP8 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP8 Probe | | Local Area Bkgd (cpm) | | |
| Instrument # | 2378 | 2138 | N/A | 3 7 | 1257 | N/A | N/A | 6.4 | |
| Cal. Due Date | 11/1/00 | 3/8/01 | N/A | | 9/14/00 | N/A | N/A | | |
| Efficiency (c/g) | 0.23 | 0.22 | N/A | | 0.23 | N/A | N/A | | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 2378 | 08/15/00 | 3.3 | -1.7 | | | | | |
| 2 | 2378 | 08/15/00 | 6.7 | 13.1 | | | | | |
| 3 | 2378 | 08/15/00 | 6.0 | 10.1 | 1257 | 08/15/00 | 6.7 | 1.5 | |
| 4 | 2378 | 08/15/00 | 10.7 | 30.5 | | | | | |
| 5 * | 2138 | 10/04/00 | 8.7 | 6.4 | 1257 | 08/15/00 | 12.7 | 28.1 | |
| 6 | 2378 | 08/15/00 | 6.7 | 13.1 | | | | | |
| 7 | 2378 | 08/15/00 | 4.0 | 1.3 | | | | | |
| 8 | 2378 | 08/15/00 | 4.0 | 1.3 | | | | | |
| 9 | 2378 | 08/15/00 | 4.7 | 4.4 | | | | | |
| 10 | 2378 | 08/15/00 | 4.0 | 1.3 | | | | | |
| 11 | 2378 | 08/15/00 | 4.0 | 1.3 | | | | | |
| 12 | 2378 | 08/15/00 | 5.3 | 7.0 | | | | | |
| 13 | 2378 | 08/15/00 | 6.0 | 10.1 | | | | | |
| 14 | 2378 | 08/15/00 | 5.3 | 7.0 | | | | | |
| 15 | 2378 | 08/15/00 | 4.7 | 4.4 | | | | | |
| | | | MIN | -1.7 | | | | | |
| | | | MAX | 30.5 | | | | | |
| | | | MEAN | 7.3 | | | | | |
| | | | SD | 7.9 | | | | | |
| | | | Transuranic DCG _{low} | 100 | | | | | |

• Location was relocated from the roof to the trailer exterior Initial result was elevated due to Po-210 (presented on Page 4 of 5 of this report)

* Location was relocated from the roof to the trailer exterior Initial result was elevated due to Po-210 (presented on Page 4 of 5 of this Data Summary)

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Survey Unit 771012 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|--------------------------------|------------------------------|----------|-----------------------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument #: | 2356 | N/A | | 1274 | N/A | N/A | 3.3 |
| Cal. Due Date | 9/29/00 | N/A | | 10/7/00 | N/A | N/A | |
| Efficiency (cid) | 0.23 | N/A | | 0.21 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 5 | 2356 | 09/29/00 | 20.7 | 74.3 | 1274 | 09/11/00 | 24.3 |
| | | | MIN | 74.3 | | | |
| | | | MAX | 74.3 | | | |
| | | | MEAN | 74.3 | | | |
| | | | SD | 0.0 | | | |
| | | | Transuranic DCG _{low} | 100 | | | |

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Survey Unit 771012 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 8/15/00 | 1.0 | 0.5 | 0.6 |
| 2 | 844 | 8/15/00 | 4.0 | 2.0 | 4.8 |
| 3 | 1052 | 8/15/00 | 0.0 | 0.0 | -0.9 |
| 4 | 844 | 8/15/00 | 1.0 | 0.5 | 0.3 |
| 5 | 857 | 8/29/00 | 3.0 | 1.5 | 3.0 |
| 6 | 1052 | 8/15/00 | 2.0 | 1.0 | 2.1 |
| 7 | 844 | 8/15/00 | 0.0 | 0.0 | -1.2 |
| 8 | 1052 | 8/15/00 | 1.0 | 0.5 | 0.6 |
| 9 | 844 | 8/15/00 | 4.0 | 2.0 | 4.8 |
| 10 | 1052 | 8/15/00 | 0.0 | 0.0 | -0.9 |
| 11 | 844 | 8/15/00 | 0.0 | 0.0 | -1.2 |
| 12 | 1052 | 8/15/00 | 0.0 | 0.0 | -0.9 |
| 13 | 844 | 8/15/00 | 1.0 | 0.5 | 0.3 |
| 14 | 1052 | 8/15/00 | 0.0 | 0.0 | -0.9 |
| 15 | 844 | 8/15/00 | 0.0 | 0.0 | -1.2 |
| | | | | MIN | -1.2 |
| | | | | MAX | 4.8 |
| | | | | MEAN | 0.6 |
| | | | | SD | 2.1 |
| | | | Transuranic DCG _{LW} | | 20 |

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ATTACHMENT M

Survey Unit 771013 Data Summary

SURVEY UNIT 771013 DATA

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Survey Unit 771013 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN -16.4 dpm/100 cm²
 MAX 44.7 dpm/100 cm²
 MEAN 20.9 dpm/100 cm²
 STD DEV 18.0 dpm/100 cm²

TRANSURANIC
 DCGL_w 100 dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN -0.6 dpm/100 cm²
 MAX 5.2 dpm/100 cm²
 MEAN 1.2 dpm/100 cm²
 STD DEV 1.4 dpm/100 cm²

TRANSURANIC
 DCGL_w 20 dpm/100 cm²

Survey Unit 771013 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|-----------------------|-------|--------------------------------|------------------------------|----------|---------|----------------------------|-----|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | | NE Electra w/ DP6 Probe | | | Local Area Bkgd (cpm) | |
| Instrument #: | 2358 | 2138 | N/A | 5.1 | 4.5 | 2379 | 1285 | N/A | 9.3 |
| Cal. Due Date | 9/29/00 | 3/8/01 | N/A | | | 10/9/00 | 3/28/01 | N/A | 3.3 |
| Efficiency (c/d): | 0.23 | 0.22 | N/A | | | 0.22 | 0.2096 | N/A | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 2358 | 08/29/00 | 5.3 | 1.0 | | | | | |
| 2 | 2358 | 08/29/00 | 11.3 | 27.3 | | | | | |
| 3 | 2358 | 08/29/00 | 7.3 | 9.8 | | | | | |
| 4 | 2358 | 08/29/00 | 14.0 | 39.1 | | | | | |
| 5 | 2358 | 08/29/00 | 7.3 | 9.8 | | | | | |
| 6 * | 2138 | 10/04/00 | 13.3 | 40.3 | 2379 | 10/09/00 | 10.7 | 8.3 | |
| 7 | 2358 | 08/29/00 | 6.0 | 4.1 | | | | | |
| 8 | 2358 | 08/29/00 | 14.7 | 42.1 | | | | | |
| 9 | 2358 | 08/29/00 | 1.3 | -16.4 | | | | | |
| 10 * | 2138 | 10/04/00 | 11.3 | 31.2 | 1285 | 10/18/00 | 3.3 | 0.9 | |
| 11 | 2358 | 08/29/00 | 12.7 | 33.4 | | | | | |
| 12 | 2358 | 08/29/00 | 10.7 | 24.6 | | | | | |
| 13 * | 2138 | 10/04/00 | 7.3 | 12.9 | | | | | |
| 14 | 2358 | 08/29/00 | 15.3 | 44.7 | | | | | |
| 15 | 2358 | 08/29/00 | 7.3 | 9.8 | | | | | |
| | | | | MIN | | | | | |
| | | | | MAX | | | | | |
| | | | | MEAN | | | | | |
| | | | | SD | | | | | |
| | | | | Transmittance DCG _W | | | | | |
| | | | | 100 | | | | | |

* Locations were relocated from the roof to the trailer exterior Initial results were elevated (>100 dpm/100 cm²) due to Po-210 (presented on Page 4 of 5 of this Data Summary)

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Survey Unit 771103 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------|-------------------------------|----------|-----------------------|-------|
| Meter Model | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument # | 2358 | N/A | | 1547 | N/A | N/A | 3.7 |
| Cal. Due Date | 9/29/00 | N/A | | 2/10/01 | N/A | N/A | |
| Efficiency (cd) | 0.22 | N/A | | 0.22 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 6 | 2358 | 08/29/00 | 42.0 | 165.4 | 1547 | 08/29/00 | 37.7 |
| 10 | 2358 | 08/29/00 | 24.0 | 84.8 | | | |
| 13 | 2358 | 08/29/00 | 35.3 | 135.4 | 1547 | 08/29/00 | 28.3 |
| | | | | 84.8 | | | |
| | | | | 165.4 | | | |
| | | | | 128.5 | | | |
| | | | | 40.7 | | | |
| | | | | 100 | | | |
| | | | | Transuranic DCGL _w | | | |

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Survey Unit 771013 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 857 | 8/29/00 | 20 | 10 | 1.5 |
| 2 | 888 | 8/29/00 | 10 | 05 | 0.6 |
| 3 | 754 | 8/29/00 | 10 | 05 | 0.9 |
| 4 | 857 | 8/29/00 | 30 | 15 | 3.0 |
| 5 | 888 | 8/29/00 | 10 | 05 | 0.6 |
| 6 | 754 | 8/29/00 | 00 | 00 | -0.6 |
| 7 | 857 | 8/29/00 | 20 | 10 | 1.5 |
| 8 | 888 | 8/29/00 | 10 | 05 | 0.6 |
| 9 | 754 | 8/29/00 | 00 | 00 | -0.6 |
| 10 | 857 | 8/29/00 | 20 | 10 | 1.5 |
| 11 | 888 | 8/29/00 | 40 | 20 | 5.2 |
| 12 | 754 | 8/29/00 | 10 | 05 | 1.5 |
| 13 | 857 | 8/29/00 | 10 | 05 | 0.0 |
| 14 | 888 | 8/29/00 | 10 | 05 | 0.6 |
| 15 | 754 | 8/29/00 | 10 | 05 | 0.9 |
| | | | | MIN | -0.6 |
| | | | | MAX | 5.2 |
| | | | | MEAN | 1.2 |
| | | | | SD | 1.4 |
| | | | Transuranic DCG _{LW} | | 20 |

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ATTACHMENT N

Survey Unit 771014 Data Summary

SURVEY UNIT 771014 DATA

Survey Unit 771014 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|-----|-------------------------|
| 100 | dpm/100 cm ² |
|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|----|-------------------------|
| 20 | dpm/100 cm ² |
|----|-------------------------|

Survey Unit 771014 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | | | |
|-------------------------------------|-------------------------|----------|-------|-----------------------------------|------------------------|-------------------------|-------|----------------------------|-----------------------|-----|--|
| Meter Model* | NE Electra w/ DP6 Probe | | | Local Area Bkpd (cpm) | | NE Electra w/ DP6 Probe | | | Local Area Bkpd (cpm) | | |
| Instrument # | 2376 | 2136 | N/A | 3.2 | 5.7 | 1257 | 2379 | N/A | 6.4 | 8.7 | |
| Cal. Due Date | 11/1/00 | 3/8/01 | N/A | | | | | | | | |
| Efficiency (c/d) | 0.23 | 0.22 | N/A | | | | | | | | |
| Total Surface Activity Measurements | | | | | | | | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | | | |
| 1 | 2376 | 08/15/00 | 7.3 | 18.1 | 1257 | 08/15/00 | 8.0 | 11.7 | | | |
| 2 | 2376 | 08/15/00 | 6.7 | 15.5 | 2379 | 10/9/00 | 8.0 | 8.8 | | | |
| 3 | 2376 | 08/15/00 | 9.3 | 26.8 | 1257 | 08/15/00 | 4.7 | -2.9 | | | |
| 4 | 2376 | 08/15/00 | 6.0 | 12.4 | 2379 | 10/9/00 | 12.7 | 27.8 | | | |
| 5 | 2376 | 08/15/00 | 4.7 | 6.7 | | | | | | | |
| 6 | 2376 | 08/15/00 | 9.3 | 26.8 | | | | | | | |
| 7 | 2376 | 08/15/00 | 4.0 | 3.7 | | | | | | | |
| 8* | 2136 | 10/9/00 | 10.7 | 22.8 | | | | | | | |
| 9 | 2376 | 08/15/00 | 8.7 | 24.2 | | | | | | | |
| 10 | 2376 | 08/15/00 | 12.0 | 38.5 | | | | | | | |
| 11 | 2376 | 08/15/00 | 6.7 | 15.5 | | | | | | | |
| 12 | 2376 | 08/15/00 | 4.0 | 3.7 | | | | | | | |
| 13 | 2376 | 08/15/00 | 2.7 | -2.0 | | | | | | | |
| 14* | 2136 | 10/9/00 | 6.7 | 4.6 | | | | | | | |
| 15 | 2376 | 08/15/00 | 10.0 | 29.8 | | | | | | | |
| | | | | MIN | | | | | | | |
| | | | | MAX | | | | | | | |
| | | | | MEAN | | | | | | | |
| | | | | SD | | | | | | | |
| | | | | Transmittance DOGL ₄₀₀ | | | | | | | |
| | | | | | | | | | | | |

* Locations were relocated from the roof to the trailer exterior Initial results were elevated (>100 dpm/100 cm^2) due to Po-210 (presented on Page 4 of 5 of this Data Summary)

Survey Unit 771014 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|------------------|------------------------------|----------|-----------------------|-------|
| Meter Model* | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument # | 2375 | N/A | | 2375 | N/A | N/A | 3.7 |
| Cal. Due Date* | 1/10/01 | N/A | | 1/10/01 | N/A | N/A | |
| Efficiency (cid) | 0.22 | N/A | | 0.22 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 8 | 2375 | 08/25/00 | 26.7 | 104.9 | 2375 * | 08/25/00 | 28.3 |
| 14 | 2375 | 08/25/00 | 34.0 | 137.5 | 2375 * | 08/25/00 | 29.7 |
| | | | MIN | 104.9 | | | |
| | | | MAX | 137.5 | | | |
| | | | MEAN | 121.2 | | | |
| | | | SD | 23.0 | | | |
| | | | Transuranic DCGM | 100 | | | |

* QC measurements were collected by a different RCT with the same instrument. No other instrument was available. This was deemed acceptable due to the fact that an extensive investigation followed to verify the presence of Po-210.

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Survey Unit 771014 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 10/6/00 | 60 | 30 | 7.9 |
| 2 | 1351 | 10/6/00 | 40 | 20 | 4.5 |
| 3 | 845 | 8/10/00 | 00 | 00 | -1.2 |
| 4 | 850 | 8/10/00 | 10 | 05 | 0.3 |
| 5 | 1354 | 10/6/00 | 20 | 10 | 2.1 |
| 6 | 1052 | 10/6/00 | 40 | 20 | 4.8 |
| 7 | 845 | 8/10/00 | 10 | 05 | 0.3 |
| 8 | 1351 | 10/6/00 | 10 | 05 | 0.0 |
| 9 | 845 | 8/10/00 | 00 | 00 | -1.2 |
| 10 | 850 | 8/10/00 | 10 | 05 | 0.3 |
| 11 | 1354 | 10/6/00 | 00 | 00 | -0.9 |
| 12 | 1052 | 10/6/00 | 40 | 20 | 4.8 |
| 13 | 1351 | 10/6/00 | 10 | 05 | 0.0 |
| 14 | 850 | 8/10/00 | 10 | 05 | 0.3 |
| 15 | 1354 | 10/6/00 | 00 | 00 | -0.9 |
| | | | | MIN | -1.2 |
| | | | | MAX | 7.9 |
| | | | | MEAN | 1.4 |
| | | | | SD | 2.8 |
| | | | Transuranic DCGL _w | | 20 |

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ATTACHMENT O

Survey Unit 771015 Data Summary

SURVEY UNIT 771015 DATA

Survey Unit 771015 Data Summary

Total Surface Activity Measurements

| | |
|----------------------------------|-------------------------|
| 15 | 15 |
| Number Required | Number Obtained |
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |
| TRANSURANIC DCGL _w | dpm/100 cm ² |

Removable Activity Measurements

| | |
|----------------------------------|-------------------------|
| 15 | 15 |
| Number Required | Number Obtained |
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |
| TRANSURANIC DCGL _w | dpm/100 cm ² |

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Survey Unit 771015 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | |
|-------------------------------------|--------------|-------------------------|-----------------------|---------------------------------|------------------------------|----------|-------|----------------------------|
| Meter Model | Instrument # | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | Serial # | Date | (cpm) | Local Area Bkgd (cpm) |
| | 2354 | 2138 | N/A | N/A | 2375 | 10/12/00 | N/A | 4.4 |
| Cal. Due Date | 1/28/01 | 3/8/01 | N/A | N/A | 1/10/01 | | N/A | |
| Efficiency (c/d) | 0.22 | 0.218 | N/A | N/A | 0.22 | | N/A | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) |
| 1 | 2354 | 10/05/00 | 6.0 | -2.6 | | | | |
| 2 | 2138 | 10/11/00 | 6.7 | 9.7 | | | | |
| 3 | 2138 | 10/11/00 | 12.7 | 28.0 | 2375 | 10/12/00 | 2.0 | -18.5 |
| 4 | 2354 | 10/05/00 | 4.7 | -8.5 | | | | |
| 5 | 2138 | 10/11/00 | 6.7 | 0.5 | | | | |
| 6 | 2138 | 10/11/00 | 12.7 | 28.0 | | | | |
| 7 | 2354 | 10/05/00 | 6.7 | 9.6 | | | | |
| 8 | 2354 | 10/05/00 | 5.3 | -5.9 | | | | |
| 9 | 2138 | 10/11/00 | 8.0 | 6.5 | | | | |
| 10 | 2138 | 10/11/00 | 12.0 | 24.8 | | | | |
| 11 | 2354 | 10/05/00 | 8.0 | 6.4 | | | | |
| 12 | 2354 | 10/05/00 | 6.0 | -2.6 | | | | |
| 13 | 2354 | 10/05/00 | 10.7 | 18.6 | | | | |
| 14 | 2354 | 10/05/00 | 4.0 | -11.6 | | | | |
| 15 | 2354 | 10/05/00 | 14.0 | 33.5 | 2375 | 10/12/00 | 3.3 | -4.7 |
| | | | | MIN | | | | |
| | | | | MAX | | | | |
| | | | | MEAN | | | | |
| | | | | SD | | | | |
| | | | | Transuranic DCGU _{avg} | | | | |
| | | | | 100 | | | | |

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Survey Unit 771015 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 857 | 10/16/00 | 0.0 | 0.0 | -0.6 |
| 2 | 857 | 10/16/00 | 0.0 | 0.0 | -0.6 |
| 3 | 888 | 10/16/00 | 0.0 | 0.0 | -0.6 |
| 4 | 1052 | 10/6/00 | 0.0 | 0.0 | -1.2 |
| 5 | 857 | 10/16/00 | 3.0 | 1.5 | 3.9 |
| 6 | 888 | 10/16/00 | 0.0 | 0.0 | -0.6 |
| 7 | 1351 | 10/6/00 | 2.0 | 1.0 | 1.5 |
| 8 | 1354 | 10/6/00 | 1.0 | 0.5 | 0.6 |
| 9 | 888 | 10/16/00 | 0.0 | 0.0 | -0.6 |
| 10 | 1052 | 10/6/00 | 0.0 | 0.0 | -1.2 |
| 11 | 1351 | 10/6/00 | 3.0 | 1.5 | 3.0 |
| 12 | 1052 | 10/6/00 | 1.0 | 0.5 | 0.3 |
| 13 | 1354 | 10/6/00 | 1.0 | 0.5 | 0.6 |
| 14 | 1351 | 10/6/00 | 3.0 | 1.5 | 3.0 |
| 15 | 1354 | 10/6/00 | 0.0 | 0.0 | -0.9 |
| | | | | MIN | -1.2 |
| | | | | MAX | 3.9 |
| | | | | MEAN | 0.4 |
| | | | | SD | 1.7 |
| | | | Transuranic DCG _{LW} | | 20 |

ATTACHMENT P

Survey Unit 771016 Data Summary

SURVEY UNIT 771016 DATA

eh1

Survey Unit 771016 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|------|-------------------------|
| -5.5 | dpm/100 cm ² |
| 74.1 | dpm/100 cm ² |
| 23.1 | dpm/100 cm ² |
| 22.3 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|-----|-------------------------|
| 100 | dpm/100 cm ² |
|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|------|-------------------------|
| -1.5 | dpm/100 cm ² |
| 1.8 | dpm/100 cm ² |
| -0.3 | dpm/100 cm ² |
| 1.1 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|----|-------------------------|
| 20 | dpm/100 cm ² |
|----|-------------------------|

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Survey Unit 771016 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------|--------------------------------|-------------------------|-----------------------|----------------------------|
| Instrument # | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe |
| 1259 | 1277 | 2375 | 3 1 | 3 3 | 2383 | N/A | N/A |
| Cal. Due Date | 10/4/00 | 1/24/01 | 1/10/01 | | 1/18/01 | N/A | N/A |
| Efficiency (cid) | 0.21 | 0.23 | 0.225 | | 0.21 | N/A | N/A |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (dpm/100 cm ²) |
| 1 | 1259 | 09/08/00 | 4.0 | 4.2 | 2383 | 09/08/00 | 11.3 |
| 2 (a) | 1277 | 10/23/00 | 19.3 | 41.3 | 2383 | 10/13/00 | 9.3 |
| 3 (a) (a) | 1277 | 10/25/00 | 26.7 | 74.1 | | | |
| 4 | 1259 | 09/08/00 | 12.0 | 42.9 | | | |
| 5 | 1259 | 09/08/00 | 7.3 | 20.2 | | | |
| 6 | 1259 | 09/08/00 | 10.7 | 36.7 | | | |
| 7 | 1259 | 09/07/00 | 4.7 | 7.6 | | | |
| 8 | 1259 | 09/07/00 | 2.0 | -6.5 | | | |
| 9 | 1259 | 09/07/00 | 5.3 | 10.5 | | | |
| 10 | 1259 | 09/07/00 | 14.7 | 56.0 | | | |
| 11 | 1259 | 09/07/00 | 6.0 | 13.9 | | | |
| 12 (1) | 2375 | 10/12/00 | 6.7 | 15.1 | | | |
| 13 | 1259 | 09/07/00 | 6.7 | 17.3 | | | |
| 14 | 1259 | 09/07/00 | 4.0 | 4.2 | | | |
| 15 | 1259 | 09/08/00 | 4.7 | 7.6 | | | |
| | | | | MIN | | | |
| | | | | MAX | | | |
| | | | | MEAN | | | |
| | | | | SD | | | |
| | | | | Transuranic DCG/L _w | | | |
| | | | | 100 | | | |

(1) Location was relocated from the roof to the trailer exterior Initial result was elevated (>100 dpm/100 cm²) due to Po-210 (presented on Page 4 of 5 of this Data Summary)

(2) Locations resurveyed due to instrument tag-out prior to post-survey performance test (LAB = 10.0 cpm).

(3) A coupon sample was collected at this location to verify the activity was due to Po-210 Elevated activity was also observed on the roof of the structure (refer to footnote 1)

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Survey Unit 771016 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------|--------------------------------|----------|----------|-------|
| Meter Model: | NE Electra w/ DP8 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP8 Probe | Local Area Bkgd (cpm) | | | |
| Instrument #: | 1259 | N/A | N/A | 3.1 | 2383 | N/A | 3.7 |
| Cal. Due Date: | 10/4/00 | N/A | N/A | | 1/18/01 | N/A | |
| Efficiency (cid): | 0.21 | N/A | N/A | | 0.21 | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 12 | 1259 | 09/07/00 | 24.0 | 101.0 | 2383 | 09/08/00 | 26.7 |
| | | | | 101.0 | | | |
| | | | | 101.0 | | | |
| | | | | 101.0 | | | |
| | | | | 0.0 | | | |
| | | | | 100 | | | |
| | | | | Transuranic DCG _{low} | | | |

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Survey Unit 771016 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|----------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 857 | 9/8/00 | 0.0 | 0.0 | -1.5 |
| 2 | 888 | 9/8/00 | 1.0 | 0.5 | 0.6 |
| 3 | 754 | 9/8/00 | 1.0 | 0.5 | 0.3 |
| 4 | 857 | 9/8/00 | 0.0 | 0.0 | -1.5 |
| 5 | 888 | 9/8/00 | 1.0 | 0.5 | 0.6 |
| 6 | 754 | 9/8/00 | 0.0 | 0.0 | -1.2 |
| 7 | 857 | 9/8/00 | 0.0 | 0.0 | -1.5 |
| 8 | 888 | 9/8/00 | 1.0 | 0.5 | 0.6 |
| 9 | 754 | 9/8/00 | 2.0 | 1.0 | 1.8 |
| 10 | 857 | 9/8/00 | 0.0 | 0.0 | -1.5 |
| 11 | 888 | 9/8/00 | 0.0 | 0.0 | -0.9 |
| 12 | 754 | 10/16/00 | 1.0 | 0.5 | 0.6 |
| 13 | 857 | 9/8/00 | 0.0 | 0.0 | -1.5 |
| 14 | 888 | 9/8/00 | 1.0 | 0.5 | 0.6 |
| 15 | 754 | 9/8/00 | 1.0 | 0.5 | 0.3 |
| | | | 1.0 | 0.5 | 0.3 |
| | | | | MIN | -1.5 |
| | | | | MAX | 1.8 |
| | | | | MEAN | -0.3 |
| | | | | SD | 1.1 |
| | | | | Transuranic DCG _{Lw} | 20 |

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ATTACHMENT Q

Survey Unit 771017 Data Summary

SURVEY UNIT 771017 DATA

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Survey Unit 771017 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | |
|----------------------------------|-----------------------------|
| TRANSURANIC DCGL _w | 100 dpm/100 cm ² |
|----------------------------------|-----------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | |
|----------------------------------|----------------------------|
| TRANSURANIC DCGL _w | 20 dpm/100 cm ² |
|----------------------------------|----------------------------|

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Survey Unit 771017 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|----------|-------|-------------------------------|----------|-------------------------|------------------------------|----------------------------|-----------------------|-----|--|
| Meter Model: | NE Electra w/ DP6 Probe | | | Local Area Bldg (cpm) | | NE Electra w/ DP6 Probe | | | Local Area Bldg (cpm) | | |
| Instrument #: | 1552 | 2136 | N/A | 4.4 | 8.7 | 2375 | 1265 | N/A | 6.3 | 1.3 | |
| Cal. Due Date: | 10/7/00 | 3/6/01 | N/A | | | 1/10/01 | 3/28/01 | N/A | | | |
| Efficiency (old) | 0.22 | 0.22 | N/A | | | 0.22 | 0.210 | N/A | | | |
| Total Surface Activity Measurements | | | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | | | |
| 1* | 2136 | 10/11/00 | 9.3 | 2.9 | | | | | | | |
| 2 | 1552 | 08/17/00 | 6.0 | 7.4 | | | | | | | |
| 3 | 1552 | 08/17/00 | 12.7 | 37.5 | | | | | | | |
| 4 | 1552 | 08/17/00 | 15.3 | 49.2 | | | | | | | |
| 5* | 2136 | 10/11/00 | 8.0 | -3.1 | | | | | | | |
| 6 | 1552 | 08/17/00 | 6.7 | 10.5 | | | | | | | |
| 7 | 1552 | 08/17/00 | 6.0 | 7.4 | | | | | | | |
| 8 | 1552 | 08/17/00 | 5.3 | 4.3 | | | | | | | |
| 9 | 1552 | 08/17/00 | 7.3 | 13.2 | | | | | | | |
| 10* | 2136 | 10/11/00 | 12.7 | 18.4 | 1265 | 10/18/00 | 3.3 | 9.5 | | | |
| 11 | 1552 | 08/17/00 | 6.7 | 10.5 | | | | | | | |
| 12* | 2136 | 10/11/00 | 16.7 | 38.8 | | | | | | | |
| 13 | 1552 | 08/17/00 | 6.7 | 10.5 | 2375 | 10/12/00 | 4.0 | -4.8 | | | |
| 14 | 1552 | 08/17/00 | 5.3 | 4.3 | | | | | | | |
| 15 | 1552 | 08/17/00 | 8.7 | 19.5 | | | | | | | |
| | | | | MIN | | | | | | | |
| | | | | MAX | | | | | | | |
| | | | | MEAN | | | | | | | |
| | | | | SD | | | | | | | |
| | | | | Transuranic DCG ₄₄ | | | | | | | |
| | | | | 100 | | | | | | | |

150

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Survey Unit 771017 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|----------|-------------------------------|------------------------------|----------|-----------------------|-------|-----------------------------|
| Meter Model: | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | | |
| Instrument #: | 1552 | 1259 | N/A | 2378 | N/A | N/A | | |
| Cal. Due Date: | 10/7/00 | 10/4/00 | N/A | 11/1/00 | N/A | N/A | | |
| Efficiency (std): | 0.22 | 0.207 | N/A | 0.23 | N/A | N/A | | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dcpm/100 cm ²) | Serial # | Date | (cpm) | (dcpm/100 cm ²) |
| 1 | 1552 | 08/17/00 | 19.3 | 67.1 | 2378 | 08/17/00 | 16.7 | 56.9 |
| 5 | 1259 | 09/08/00 | 11.3 | 33.6 | | | | |
| 10 | 1552 | 08/17/00 | 28.0 | 106.2 | 2378 | 08/17/00 | 32.0 | 123.5 |
| 12 | 1259 | 09/08/00 | 15.3 | 53.0 | | | | |
| | | | MIN | 33.6 | | | | |
| | | | MAX | 106.2 | | | | |
| | | | MEAN | 65.0 | | | | |
| | | | SD | 30.7 | | | | |
| | | | Transuranic DOGL _w | 100 | | | | |

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Survey Unit 771017 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 10/17/00 | 0.0 | 0.0 | -0.9 |
| 2 | 888 | 8/17/00 | 1.0 | 0.5 | 0.3 |
| 3 | 754 | 8/17/00 | 1.0 | 0.5 | 1.2 |
| 4 | 857 | 8/17/00 | 0.0 | 0.0 | -0.6 |
| 5 | 1178 | 10/17/00 | 1.0 | 0.5 | 1.2 |
| 6 | 888 | 8/17/00 | 0.0 | 0.0 | -1.2 |
| 7 | 754 | 8/17/00 | 0.0 | 0.0 | -0.3 |
| 8 | 857 | 8/17/00 | 1.0 | 0.5 | 0.9 |
| 9 | 888 | 8/17/00 | 0.0 | 0.0 | 0.0 |
| 10 | 1409 | 10/17/00 | 1.0 | 0.5 | 0.3 |
| 11 | 857 | 8/17/00 | 0.0 | 0.0 | -0.6 |
| 12 | 1052 | 10/17/00 | 0.0 | 0.0 | -0.9 |
| 13 | 888 | 8/17/00 | 0.0 | 0.0 | -1.2 |
| 14 | 754 | 8/17/00 | 0.0 | 0.0 | -0.3 |
| 15 | 857 | 8/17/00 | 1.0 | 0.5 | 0.9 |
| | | | MIN | 0.5 | -1.2 |
| | | | MAX | | 1.2 |
| | | | MEAN | | -0.1 |
| | | | SD | | 0.9 |
| | | | Transuranic DCGL _w | | 20 |

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ATTACHMENT R

Survey Unit 771018 Data Summary

SURVEY UNIT 771018 DATA

Survey Unit 771018 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 12 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w 100 dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 12 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w 20 dpm/100 cm²

Survey Unit 771018 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------|----------------------------|------------------------------|-----------------------|-------------------------|----------------------------|-----------------------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | Local Area Bkgd (cpm) |
| Instrument #: | 2358 | N/A | N/A | 2.0 | 1259 | N/A | N/A | 6.0 | |
| Cal. Due Date | 3/11/01 | N/A | N/A | | 10/4/00 | N/A | N/A | | |
| Efficiency (c/d) | 0.212 | N/A | N/A | | 0.207 | N/A | N/A | | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 (1) | | | | | | | | | |
| 2 | 2358 | 09/25/00 | 6.7 | 22.0 | | | | | |
| 3 | 2358 | 09/25/00 | 18.0 | 75.4 | 1259 | 09/28/00 | 18.0 | 48.4 | |
| 4 | 2358 | 09/25/00 | 3.3 | 6.0 | | | | | |
| 5 | 2358 | 09/25/00 | 7.3 | 24.8 | | | | | |
| 6 | 2358 | 09/25/00 | 6.0 | 18.7 | | | | | |
| 7 | 2358 | 09/25/00 | 11.3 | 43.7 | | | | | |
| 8 (1) | | | | | | | | | |
| 9 | 2358 | 09/25/00 | 6.7 | 22.0 | | | | | |
| 10 | 2358 | 09/25/00 | 2.7 | 3.1 | | | | | |
| 11 | 2358 | 09/25/00 | 6.7 | 22.0 | | | | | |
| 12 | 2358 | 09/25/00 | 6.7 | 22.0 | | | | | |
| 13 | 2358 | 09/25/00 | 16.7 | 60.2 | 1259 | 09/28/00 | 20.7 | 71.2 | |
| 14 (1) | | | | | | | | | |
| 15 | 2358 | 09/25/00 | 6.7 | 22.0 | | | | | |
| | | | | MIN | | | | | 3.1 |
| | | | | MAX | | | | | 75.4 |
| | | | | MEAN | | | | | 29.3 |
| | | | | SD | | | | | 22.5 |
| | | | | Transmittance DCG/Lw | | | | | 100 |

(1) Data could not be collected due to standing water

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Survey Unit 771018 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) |
| 1 ⁽¹⁾ | | | | |
| 2 | 1052 | 9/26/00 | 0 0 | -0.3 |
| 3 | 844 | 9/26/00 | 1 0 | 1.2 |
| 4 | 1351 | 9/26/00 | 0 0 | -0.9 |
| 5 | 1052 | 9/26/00 | 1 0 | 2.7 |
| 6 | 844 | 9/26/00 | 1 0 | 1.2 |
| 7 | 1351 | 9/26/00 | 2 0 | 5.2 |
| 8 ⁽¹⁾ | | | | |
| 9 | 1052 | 9/26/00 | 2 0 | 5.8 |
| 10 | 844 | 9/26/00 | 1 0 | 1.2 |
| 11 | 1351 | 9/26/00 | 2 0 | 5.2 |
| 12 | 1052 | 9/26/00 | 1 0 | 2.7 |
| 13 | 844 | 9/26/00 | 3 0 | 7.3 |
| 14 ⁽¹⁾ | | | | |
| 15 | 1351 | 9/26/00 | 0 0 | -0.9 |
| | | | MIN | -0.9 |
| | | | MAX | 7.3 |
| | | | MEAN | 2.5 |
| | | | SD | 2.8 |
| | | | Transuranic DCG _{LW} | 20 |

(1) Data could not be collected due to standing water

ATTACHMENT S

Survey Unit 771019 Data Summary

SURVEY UNIT 771019 DATA

Survey Unit 771019 Data Summary

| <u>Total Surface Activity Measurements</u> | | <u>Removable Activity Measurements</u> | |
|--|-------------------------|--|-------------------------|
| 15 | 15 | 15 | 15 |
| Number Required | Number Obtained | Number Required | Number Obtained |
| MIN | dpm/100 cm ² | MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² | MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² | MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² | STD DEV | dpm/100 cm ² |
| TRANSURANIC DCGL _w | dpm/100 cm ² | TRANSURANIC DCGL _w | dpm/100 cm ² |
| 100 | dpm/100 cm ² | 20 | dpm/100 cm ² |
| -4.6 | dpm/100 cm ² | -1.8 | dpm/100 cm ² |
| 240.8 | dpm/100 cm ² | 2.1 | dpm/100 cm ² |
| 41.5 | dpm/100 cm ² | -0.2 | dpm/100 cm ² |
| 68.8 | dpm/100 cm ² | 1.3 | dpm/100 cm ² |

NOTE Elevated readings (>100 dpm/100 cm²) observed the the B770 exterior (refer to page 4 of 6)

Survey Unit 771019 Data Summary (Excluding B770 Exterior Data)

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 11 * | 10 |
| Number Required | Number Obtained |

| | | |
|---------|------|-------------------------|
| MIN | -4.6 | dpm/100 cm ² |
| MAX | 11.3 | dpm/100 cm ² |
| MEAN | 3.9 | dpm/100 cm ² |
| STD DEV | 5.9 | dpm/100 cm ² |

| | | |
|----------------------------------|-----|-------------------------|
| TRANSURANIC DCGL _w | 100 | dpm/100 cm ² |
|----------------------------------|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 11 * | 10 |
| Number Required | Number Obtained |

| | | |
|---------|------|-------------------------|
| MIN | -1.8 | dpm/100 cm ² |
| MAX | 2.1 | dpm/100 cm ² |
| MEAN | -0.2 | dpm/100 cm ² |
| STD DEV | 1.2 | dpm/100 cm ² |

| | | |
|----------------------------------|----|-------------------------|
| TRANSURANIC DCGL _w | 20 | dpm/100 cm ² |
|----------------------------------|----|-------------------------|

* Calculated based on actual standard deviation

Survey Unit 771019 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------|------------------------------|----------|----------|-------|
| Meter Model | NE Electra w/ DP8 Probe | Local Area Bkgd (cpm) | NE Electra w/ DP8 Probe | Local Area Bkgd (cpm) | | | |
| Instrument # | 1259 | N/A | N/A | 3.0 | 1262 | N/A | 0.0 |
| Cal. Due Date: | 10/4/00 | N/A | N/A | | 11/17/00 | N/A | |
| Efficiency (cld) | 0.21 | N/A | N/A | | 0.21 | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1 * | 1259 | 09/08/00 | 12.7 | 47.1 | | | |
| 2 | 1259 | 09/07/00 | 5.3 | 11.3 | | | |
| 3 | 1259 | 09/08/00 | 4.0 | 5.0 | | | |
| 4 | 1259 | 09/08/00 | 3.3 | 1.6 | | | |
| 5 | 1259 | 09/08/00 | 3.3 | 1.6 | | | |
| 6 * | 1259 | 09/07/00 | 18.0 | 72.8 | | | |
| 7 | 1259 | 09/06/00 | 2.0 | -4.6 | | | |
| 8 | 1259 | 09/08/00 | 2.3 | -3.2 | | | |
| 9 | 1259 | 09/08/00 | 2.7 | -1.3 | | | |
| 10 | 1259 | 09/08/00 | 5.3 | 11.3 | | | |
| 11 | 1259 | 09/07/00 | 4.7 | 8.4 | | | |
| 12 | 1259 | 09/08/00 | 4.7 | 8.4 | | | |
| 13 * | 1259 | 09/08/00 | 52.7 | 240.8 | 1262 | 09/07/00 | 47.3 |
| 14 * | 1259 | 09/08/00 | 20.7 | 85.9 | | | |
| 15 * | 1259 | 09/08/00 | 31.3 | 137.2 | 1262 | 09/07/00 | 27.7 |
| | | | | MIN | | | |
| | | | | MAX | | | |
| | | | | MEAN | | | |
| | | | | SD | | | |
| | | | | insuranc DCG | | | |
| | | | | 100 | | | |

* Located on exterior of B770. A coupon sample was collected at area of highest elevated activity (near location #13). Results confirm the presence of low concentrations of Am-241 (1.63 pCi/g) (refer to page 5 of 5 of this data summary). Accordingly, the exterior of building 770 will be decontaminated or dispositioned as radiological waste

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Survey Unit 771019 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 9/7/00 | 20 | 10 | 2.1 |
| 2 | 844 | 9/7/00 | 10 | 05 | -0.3 |
| 3 | 1351 | 9/7/00 | 10 | 05 | 0.0 |
| 4 | 1052 | 9/7/00 | 1.0 | 05 | 0.6 |
| 5 | 844 | 9/7/00 | 00 | 00 | -1.8 |
| 6 | 1351 | 9/7/00 | 00 | 00 | -1.5 |
| 7 | 1052 | 9/7/00 | 20 | 10 | 2.1 |
| 8 | 844 | 9/7/00 | 00 | 00 | -1.8 |
| 9 | 1351 | 9/7/00 | 10 | 05 | 0.0 |
| 10 | 1052 | 9/7/00 | 10 | 05 | 0.6 |
| 11 | 844 | 9/7/00 | 10 | 05 | -0.3 |
| 12 | 1351 | 9/7/00 | 00 | 00 | -1.5 |
| 13 | 1052 | 9/7/00 | 10 | 05 | 0.6 |
| 14 | 844 | 9/7/00 | 00 | 00 | -1.8 |
| 15 | 1351 | 9/7/00 | 10 | 05 | 0.0 |
| | | | | MIN | -1.8 |
| | | | | MAX | 2.1 |
| | | | | MEAN | -0.2 |
| | | | | SD | 1.3 |
| | | | Transuranic DCG _{LW} | | 20 |

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Survey Unit 771019 Coupon Sample Results

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | TRANSURANIC TOTAL (dpm/100cm ²) DCGL _w =100 |
|----------------------|------------------------|-----------------|------------|-------|-------------|------------|---------------------------------|--|---|---|
| B770, West Wall | 1 | 00N0089-001 001 | Pu-239/240 | 0.048 | 0.022 | 4.78 | 2.5 | 3.2 | 1.4 | 110.4 |
| | | | Am-241 | 1.630 | 0.027 | | | 107.2 | 1.8 | |

| | |
|---------------------|-------|
| MIN | 110.4 |
| MAX | 110.4 |
| MEAN | 110.4 |
| SD | 0.0 |
| DCGL _w = | 100 |

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ATTACHMENT T

Survey Unit 771020 Data Summary

SURVEY UNIT 771020 DATA

Survey Unit 771020 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| |
|-----|
| 100 |
|-----|

dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| |
|----|
| 20 |
|----|

dpm/100 cm²

Survey Unit 771020 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | Quality Control Survey | | |
|-------------------------------------|----------|-------------------------|---------|--------------------------------|------------------------------|----------|---------|
| Instrument #: | 2358 | NE Electra w/ DP6 Probe | 1277 | N/A | NE Electra w/ DP6 Probe | 2138 | 1285 |
| Cal. Due Date: | 3/11/01 | | 1/24/01 | N/A | | 3/8/01 | 3/28/01 |
| Efficiency (cid) | 0.21 | | 0.23 | N/A | | 0.22 | 0.2096 |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1 (1) | 1277 | 10/25/00 | 12.7 | 25.3 | 2138 | 10/11/00 | 13.3 |
| 2 (1) | 1277 | 10/25/00 | 19.3 | 54.6 | | | |
| 3 (1) | 1277 | 10/25/00 | 8.7 | 7.6 | | | |
| 4 (1) | 1277 | 10/25/00 | 13.3 | 28.0 | | | |
| 5 | 2358 | 10/08/00 | 8.0 | 6.7 | | | |
| 6 (1) | 1277 | 10/25/00 | 16.0 | 40.0 | | | |
| 7 | 2358 | 10/08/00 | 3.3 | -15.5 | | | |
| 8 | 2358 | 10/08/00 | 9.3 | 12.8 | | | |
| 9 (1) | 1277 | 10/25/00 | 12.0 | 22.2 | | | |
| 10 (1) | 1277 | 10/25/00 | 12.0 | 22.2 | | | |
| 11 | 2358 | 10/08/00 | 3.3 | -15.5 | | | |
| 12 (1) | 1277 | 10/25/00 | 9.3 | 10.2 | | | |
| 13 (1) | 1277 | 10/25/00 | 25.3 | 81.2 | | | |
| 14 | 2358 | 10/08/00 | 5.3 | -8.0 | | | |
| 15 (1) | 1277 | 10/25/00 | 20.7 | 60.8 | 1285 | 10/18/00 | 16.7 |
| | | | | MIN | | | |
| | | | | MAX | | | |
| | | | | MEAN | | | |
| | | | | SD | | | |
| | | | | Transuranic DCG _{low} | | | |
| | | | | | | | 73.8 |

(1) Locations were resurveyed due to instrument damage/repair that occurred prior to the post-survey performance test

(2) Location #13 located on the roof of B775, which is a concrete material. A sample collected on 10/25/00 indicated very low levels of Pu-239 (equates to < 5 dpm/100

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Survey Unit 771020 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|--|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) | |
| 1 | 1052 | 10/17/00 | 10 | 0.5 | 0.6 | |
| 2 | 1178 | 10/17/00 | 00 | 0.0 | -0.3 | |
| 3 | 1409 | 10/17/00 | 00 | 0.0 | 0.0 | |
| 4 | 1052 | 10/17/00 | 10 | 0.5 | 0.6 | |
| 5 | 1178 | 10/17/00 | 00 | 0.0 | -0.3 | |
| 6 | 1409 | 10/17/00 | 10 | 0.5 | 1.5 | |
| 7 | 1052 | 10/17/00 | 00 | 0.0 | -0.9 | |
| 8 | 1178 | 10/17/00 | 00 | 0.0 | -0.3 | |
| 9 | 1409 | 10/17/00 | 10 | 0.5 | 1.5 | |
| 10 | 1052 | 10/17/00 | 10 | 0.5 | 0.6 | |
| 11 | 1178 | 10/17/00 | 00 | 0.0 | -0.3 | |
| 12 | 1409 | 10/17/00 | 00 | 0.0 | 0.0 | |
| 13 | 1052 | 10/17/00 | 10 | 0.5 | 0.6 | |
| 14 | 1178 | 10/17/00 | 10 | 0.5 | 1.2 | |
| 15 | 1409 | 10/17/00 | 00 | 0.0 | 0.0 | |
| | | | | MIN | -0.9 | |
| | | | | MAX | 1.5 | |
| | | | | MEAN | 0.3 | |
| | | | | SD | 0.7 | |
| | | | Transuranic DCGL _w | | 20 | |

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Survey Unit 771020 Concrete Sample Data

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | TRANSURANIC TOTAL (dpm/100cm ²) DCGL _w =100 |
|----------------------|------------------------|-----------------|------------|--------|-------------|------------|---------------------------------|--|---|---|
| B775 Roof | 1 | 01N0031-002 001 | Pu-238 | 0.013 | 0.032 | 37.63 | 26.25 | 0.6 | 1.6 | |
| | | | Pu-239/240 | 0.081 | 0.045 | | | 4.0 | 2.2 | |
| | | | Am-241 | -0.070 | 0.014 | | | -3.5 | 0.7 | |
| | | | | | | | | | | 1.2 |

| | |
|-------------------------|-----|
| MIN | 1.2 |
| MAX | 1.2 |
| MEAN | 1.2 |
| SD | 0.0 |
| DCGL _w = 100 | |

ATTACHMENT U

Survey Unit 771023 Data Summary

SURVEY UNIT 771023 DATA

Survey Unit 771023 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w dpm/100 cm²

Survey Unit 771023 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------|--------------------------------|----------|-----------------------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument #: | 2138 | 2375 | N/A | 2383 | N/A | N/A | 5.4 |
| Cal. Due Date: | 3/8/01 | 1/10/01 | N/A | 1/18/01 | N/A | N/A | |
| Efficiency (old) | 0.22 | 0.22 | N/A | 0.21 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1* | 2138 | 10/11/00 | 31.3 | 120.6 | | | |
| 2 | 2138 | 10/11/00 | 18.0 | 59.7 | | | |
| 3* | 2138 | 10/11/00 | 32.0 | 123.8 | | | |
| 4* | 2138 | 10/11/00 | 33.3 | 129.8 | 2383 | 10/13/00 | 30.7 |
| 5* | 2138 | 10/11/00 | 31.3 | 120.6 | | | |
| 6 | 2375 | 10/12/00 | 18.7 | 61.1 | | | |
| 7 | 2375 | 10/12/00 | 14.0 | 40.2 | | | |
| 8 | 2375 | 10/12/00 | 16.7 | 52.2 | | | |
| 9 | 2375 | 10/12/00 | 14.7 | 43.3 | | | |
| 10* | 2375 | 10/12/00 | 29.3 | 108.3 | | | |
| 11 | 2375 | 10/12/00 | 20.0 | 66.9 | | | |
| 12 | 2375 | 10/12/00 | 18.0 | 58.0 | | | |
| 13* | 2375 | 10/12/00 | 36.0 | 138.1 | | | |
| 14 | 2375 | 10/12/00 | 18.7 | 61.1 | | | |
| 15 | 2375 | 10/12/00 | 12.0 | 31.3 | | | |
| | | | | MIN | | | |
| | | | | MAX | | | |
| | | | | MEAN | | | |
| | | | | SD | | | |
| | | | | Transuranic DCG _{Low} | | | 100 |
| | | | | | | | 182.3 |

* All elevated results (>100 dpm/100 cm²) were detected on the roof of the structure (concrete material). A sample collected from this area indicated the presence of low levels of Pu-239 (refer to page 5 of 5). The elevated activity is therefore attributed to naturally-occurring radioactive material. Roof locations will be relocated in order to complete the survey package.

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Survey Unit 771023 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|----------------|-------------|-------------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 857 | 10/16/00 | 10 | 0.5 | 0.9 |
| 2 | 888 | 10/16/00 | 00 | 0.0 | -0.6 |
| 3 | 754 | 10/16/00 | 00 | 0.0 | -0.9 |
| 4 | 857 | 10/16/00 | 10 | 0.5 | 0.9 |
| 5 | 888 | 10/16/00 | 10 | 0.5 | 0.9 |
| 6 | 754 | 10/16/00 | 00 | 0.0 | -0.9 |
| 7 | 857 | 10/16/00 | 10 | 0.5 | 0.9 |
| 8 | 888 | 10/16/00 | 00 | 0.0 | -0.6 |
| 9 | 754 | 10/16/00 | 00 | 0.0 | -0.9 |
| 10 | 857 | 10/16/00 | 10 | 0.5 | 0.9 |
| 11 | 888 | 10/16/00 | 10 | 0.5 | 0.9 |
| 12 | 754 | 10/16/00 | 10 | 0.5 | 1.5 |
| 13 | 857 | 10/16/00 | 10 | 0.5 | 0.9 |
| 14 | 888 | 10/16/00 | 00 | 0.0 | -0.6 |
| 15 | 754 | 10/16/00 | 00 | 0.0 | -0.9 |
| | | | | | MIN |
| | | | | | MAX |
| | | | | | MEAN |
| | | | | | SD |
| | | | | | Transuranic DCG _{LW} |
| | | | | | 20 |

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Survey Unit 771023 Concrete Sample Data

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | TRANSURANIC TOTAL (dpm/100cm ²) DCGL _w =100 |
|----------------------|------------------------|-----------------|------------|-------|-------------|------------|---------------------------------|--|---|---|
| B728 Roof | 1 | 01N0031-001 001 | Pu-238 | 0.030 | 0.038 | 62.09 | 26.25 | 2.4 | 3.1 | |
| | | | Pu-239/240 | 0.236 | 0.080 | | | 19.2 | 6.5 | |
| | | | Am-241 | 0.029 | 0.104 | | | 2.4 | 8.5 | |
| | | | | | | | | | | 24.0 |

| | |
|-------------------------|------|
| MIN | 24.0 |
| MAX | 24.0 |
| MEAN | 24.0 |
| SD | 0.0 |
| DCGL _w = 100 | |

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ATTACHMENT V

Survey Unit 771024 Data Summary

SURVEY UNIT 771024 DATA

Survey Unit 771024 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 9 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 9 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w dpm/100 cm²

Survey Unit 771024 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------|------------------------------|----------|-----------------------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument #: | 2354 | N/A | | 1265 | N/A | N/A | 6.4 |
| Cal. Due Date: | 1/26/01 | N/A | | 3/28/01 | N/A | N/A | |
| Efficiency (cd): | 0.22 | N/A | | 0.21 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1 | 2354 | 10/17/00 | 13.3 | 35.6 | 1265 | 10/18/00 | 10.7 |
| 2 | 2354 | 10/17/00 | 16.7 | 50.9 | | | |
| 3 | 1265 | 10/18/00 | 4.7 | 3.4 | | | |
| 4 | 2354 | 10/17/00 | 14.0 | 38.8 | | | |
| 5 * | | | | | | | |
| 6 | 2354 | 10/17/00 | 5.3 | -0.5 | | | |
| 7 | 2354 | 10/17/00 | 15.3 | 44.6 | 1265 | 10/18/00 | 8.0 |
| 8 * | | | | | | | |
| 9 * | | | | | | | |
| 10 | 1265 | 10/18/00 | 2.0 | -16.3 | | | |
| 11 * | | | | | | | |
| 12 | 2354 | 10/17/00 | 15.3 | 44.6 | | | |
| 13 | 1265 | 10/18/00 | 15.3 | 47.2 | | | |
| 14 * | | | | | | | |
| 15 * | | | | | | | |
| | | | | MIN | | | |
| | | | | MAX | | | |
| | | | | MEAN | | | |
| | | | | SD | | | |
| | | | | Transuranic DCG Low | | | |
| | | | | | | | |

* Locations not surveyed at this time due to inaccessibility (all located on T774B)

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Survey Unit 771024 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|---|---------------|--------------|----------------|-------------|--|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 857 | 10/19/00 | 0.0 | 0.0 | -1.8 |
| 2 | 754 | 10/19/00 | 1.0 | 0.5 | 0.9 |
| 3 | 857 | 10/19/00 | 0.0 | 0.0 | -1.8 |
| 4 | 754 | 10/19/00 | 3.0 | 1.5 | 3.9 |
| 5* | | | | | |
| 6 | 857 | 10/19/00 | 0.0 | 0.0 | -1.8 |
| 7 | 754 | 10/19/00 | 0.0 | 0.0 | -0.6 |
| 8* | | | | | |
| 9* | | | | | |
| 10 | 857 | 10/19/00 | 1.0 | 0.5 | -0.3 |
| 11* | | | | | |
| 12 | 754 | 10/19/00 | 2.0 | 1.0 | 2.4 |
| 13 | 857 | 10/19/00 | 7.0 | 3.5 | 8.8 |
| 14* | | | | | |
| 15* | | | | | |
| <div>MIN</div> <div>MAX</div> <div>MEAN</div> <div>SD</div> <div>Transuranic DCG_{LW}</div> | | | | | <div>-1.8</div> <div>8.8</div> <div>1.1</div> <div>3.5</div> <div>20</div> |

* Locations not surveyed at this time due to inaccessibility (all located on T774B).

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ATTACHMENT W

Survey Unit 771025 Data Summary

SURVEY UNIT 771025 DATA

Survey Unit 771025 Data Summary

Total Surface Activity Measurements

| | |
|----------------------------------|-------------------------|
| 15 | 6 |
| Number Required | Number Obtained |
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |
| TRANSURANIC DCGL _w | dpm/100 cm ² |

Removable Activity Measurements

| | |
|----------------------------------|-------------------------|
| 15 | 6 |
| Number Required | Number Obtained |
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |
| TRANSURANIC DCGL _w | dpm/100 cm ² |

Survey Unit 771025 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------|------------------------------|----------|----------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | | | |
| Instrument #: | 2354 | N/A | N/A | 5.4 | 1285 | N/A | 3.3 |
| Cal. Due Date: | 1/28/01 | N/A | N/A | | 3/28/01 | N/A | |
| Efficiency (std): | 0.22 | N/A | N/A | | 0.21 | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1 (1) | | | | | | | |
| 2 | 2354 | 10/17/00 | 12.7 | 33.0 | | | |
| 3 (1) | | | | | | | |
| 4 (2) | 2354 | 10/17/00 | 48.0 | 192.3 | 1285 | 10/17/00 | 43.3 |
| 5 (1) | | | | | | | |
| 6 (1) | | | | | | | |
| 7 (1) | | | | | | | |
| 8 | 2354 | 10/17/00 | 12.7 | 33.0 | | | |
| 9 | 2354 | 10/17/00 | 8.7 | 18.0 | | | |
| 10 (1) | | | | | | | |
| 11 | 2354 | 10/17/00 | 16.7 | 51.1 | | | |
| 12 (2) | 2354 | 10/17/00 | 37.3 | 144.0 | 1285 | 10/17/00 | 33.3 |
| 13 (1) | | | | | | | |
| 14 (1) | | | | | | | |
| 15 (1) | | | | | | | |
| | | | | MIN | | | |
| | | | | MAX | | | |
| | | | | MEAN | | | |
| | | | | SD | | | |
| | | | | Transuranic DCGI | | | |
| | | | | 100 | | | |

(1) Locations not surveyed at this time due to inaccessibility (all located on T774A)

(2) Elevated readings are suspected to be due to Po-210 (located on top surface of T-176) Sampling will be performed following approval to breach tanks

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Survey Unit 771025 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|----------------|-------------|-------------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1* | | | | | |
| 2 | 857 | 10/19/00 | 2.0 | 1.0 | 1.2 |
| 3* | | | | | |
| 4 | 754 | 10/19/00 | 1.0 | 0.5 | 0.9 |
| 5* | | | | | |
| 6* | | | | | |
| 7* | | | | | |
| 8 | 857 | 10/19/00 | 1.0 | 0.5 | -0.3 |
| 9 | 754 | 10/19/00 | 1.0 | 0.5 | 0.9 |
| 10* | | | | | |
| 11 | 857 | 10/19/00 | 1.0 | 0.5 | -0.3 |
| 12 | 754 | 10/19/00 | 0.0 | 0.0 | -0.6 |
| 13* | | | | | |
| 14* | | | | | |
| 15* | | | | | |
| | | | | | MIN |
| | | | | | MAX |
| | | | | | MEAN |
| | | | | | SD |
| | | | | | Transuranic DCG _{Lw} |
| | | | | | 20 |

* Locations not surveyed at this time due to inaccessibility (all located on T774A)

ATTACHMENT X

Survey Unit 771026 Data Summary

SURVEY UNIT 771026 DATA

Survey Unit 771026 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 7 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w 100 dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 7 |
| Number Required | Number Obtained |

MIN dpm/100 cm²
 MAX dpm/100 cm²
 MEAN dpm/100 cm²
 STD DEV dpm/100 cm²

TRANSURANIC
 DCGL_w 20 dpm/100 cm²

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Survey Unit 771026 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|---------------------------------|------------------------------|-------------------------|-----------------------|-------------------------|
| Meter Model | NE Electra w/ DP6 Probe | Local Area Blvd (cpm) | NE Electra w/ DP6 Probe | Local Area Blvd (cpm) | NE Electra w/ DP6 Probe | Local Area Blvd (cpm) | NE Electra w/ DP6 Probe |
| Instrument # | 2372 | N/A | N/A | 4.9 | N/A | N/A | N/A |
| Cal. Due Date | 1/17/01 | N/A | N/A | | N/A | N/A | N/A |
| Efficiency (cid) | 0.22 | N/A | N/A | | N/A | N/A | N/A |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) |
| 1* | | | | | | | |
| 2 | 2372 | 10/19/00 | 6.0 | 4.8 | | | |
| 3 | 2372 | 10/19/00 | 7.3 | 10.8 | | | |
| 4 | 2372 | 10/19/00 | 8.7 | 17.2 | | | |
| 5 | 2372 | 10/19/00 | 8.0 | 14.0 | | | |
| 6* | | | | | | | |
| 7* | | | | | | | |
| 8* | | | | | | | |
| 9* | | | | | | | |
| 10* | | | | | | | |
| 11 | 2372 | 10/19/00 | 5.7 | 3.5 | | | |
| 12 | 2372 | 10/19/00 | 14.7 | 44.7 | | | |
| 13* | | | | | | | |
| 14* | | | | | | | |
| 15 | 2372 | 10/19/00 | 21.3 | 74.9 | | | |
| | | | MIN | 3.5 | | | |
| | | | MAX | 74.9 | | | |
| | | | MEAN | 24.3 | | | |
| | | | SD | 26.2 | | | |
| | | | Transuranic DCGU ₁₀₀ | 100 | | | |

* Locations could not be accessed due to equipment interference in the overhead. Pre-Demolition Survey will be completed following the removal of equipment.

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Survey Unit 771026 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|----------------|-------------------------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1* | | | | | |
| 2 | 857 | 10/19/00 | 00 | 00 | -1.8 |
| 3 | 754 | 10/19/00 | 00 | 00 | -0.6 |
| 4 | 857 | 10/19/00 | 00 | 00 | -1.8 |
| 5 | 754 | 10/19/00 | 00 | 00 | -0.6 |
| 6* | | | | | |
| 7* | | | | | |
| 8* | | | | | |
| 9* | | | | | |
| 10* | | | | | |
| 11 | 857 | 10/19/00 | 20 | 10 | 1.2 |
| 12 | 754 | 10/19/00 | 10 | 05 | 0.9 |
| 13* | | | | | |
| 14* | | | | | |
| 15 | 857 | 10/19/00 | 00 | 00 | -1.8 |
| | | | | MIN | -1.8 |
| | | | | MAX | 1.2 |
| | | | | MEAN | -0.6 |
| | | | | SD | 13 |
| | | | | Transuranic DCG _{LW} | 20 |

* Locations could not be accessed due to equipment interference in the overhead. Pre-Demolition Survey will be completed following the removal of equipment

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ATTACHMENT Y

Survey Unit 771027 Data Summary

SURVEY UNIT 771027 DATA

Survey Unit 771027 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 7 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|------|-------------------------|
| -1.6 | dpm/100 cm ² |
| 67.1 | dpm/100 cm ² |
| 15.6 | dpm/100 cm ² |
| 23.6 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|-----|-------------------------|
| 100 | dpm/100 cm ² |
|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 7 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

| | |
|------|-------------------------|
| -1.8 | dpm/100 cm ² |
| 1.2 | dpm/100 cm ² |
| 0.0 | dpm/100 cm ² |
| 1.1 | dpm/100 cm ² |

TRANSURANIC
DCGL_w

| | |
|----|-------------------------|
| 20 | dpm/100 cm ² |
|----|-------------------------|

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Survey Unit 771027 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------------|---|----------|------|-------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | | | |
| Instrument #: | 2372 | N/A | N/A | N/A | N/A | N/A | N/A |
| Cal. Due Date: | 1/17/01 | N/A | N/A | N/A | N/A | N/A | N/A |
| Efficiency (cd): | 0.22 | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dm ² /100 cm ²) | Serial # | Date | (cpm) |
| 1* | | | | | | | |
| 2* | | | | | | | |
| 3* | | | | | | | |
| 4* | | | | | | | |
| 5 | 2372 | 10/19/00 | 8.7 | 3.0 | | | |
| 6 | 2372 | 10/19/00 | 8.7 | 12.2 | | | |
| 7* | | | | | | | |
| 8 | 2372 | 10/19/00 | 9.3 | 14.9 | | | |
| 9 | 2372 | 10/19/00 | 6.3 | 1.2 | | | |
| 10* | | | | | | | |
| 11* | | | | | | | |
| 12* | | | | | | | |
| 13 | 2372 | 10/19/00 | 8.7 | -1.6 | | | |
| 14 | 2372 | 10/19/00 | 8.7 | 12.2 | | | |
| 15 | 2372 | 10/19/00 | 20.7 | 87.1 | | | |
| | | | MIN | -1.6 | | | |
| | | | MAX | 87.1 | | | |
| | | | MEAN | 15.6 | | | |
| | | | SD | 23.6 | | | |
| | | | Transuranic DCGL _w | 100 | | | |

* Locations could not be accessed due to equipment interference in the overhead. Pre-Demolition Survey will be completed following the removal of equipment.

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Survey Unit 771027 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 * | | | | | |
| 2 * | | | | | |
| 3 * | | | | | |
| 4 * | | | | | |
| 5 | 857 | 10/19/00 | 1.0 | 0.5 | -0.3 |
| 6 | 754 | 10/19/00 | 1.0 | 0.5 | 0.9 |
| 7 * | | | | | |
| 8 | 857 | 10/19/00 | 1.0 | 0.5 | -0.3 |
| 9 | 754 | 10/19/00 | 1.0 | 0.5 | 0.9 |
| 10 * | | | | | |
| 11 * | | | | | |
| 12 * | | | | | |
| 13 | 857 | 10/19/00 | 0.0 | 0.0 | -1.8 |
| 14 | 754 | 10/19/00 | 0.0 | 0.0 | -0.6 |
| 15 | 857 | 10/19/00 | 2.0 | 1.0 | 1.2 |
| | | | MIN | | |
| | | | MAX | | |
| | | | MEAN | | |
| | | | SD | | |
| | | | Transuranic DCGL _w | | |
| | | | 20 | | |

* Locations could not be accessed due to equipment into

* Locations could not be accessed due to equipment interference in the overhead. Pre-Demolition Survey will be completed following the removal of equipment

ATTACHMENT Z

Survey Unit 771030 Data Summary

SURVEY UNIT 771030 DATA

198

Survey Unit 771030 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

dpm/100 cm²
dpm/100 cm²
dpm/100 cm²
dpm/100 cm²

TRANSURANIC
DCGL_w

100

dpm/100 cm²

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

MIN
MAX
MEAN
STD DEV

dpm/100 cm²
dpm/100 cm²
dpm/100 cm²
dpm/100 cm²

TRANSURANIC
DCGL_w

20

dpm/100 cm²

Survey Unit 771030 Total Surface Contamination Results

| Total Surface Activity Survey | | | | | | | | | |
|-------------------------------------|--------------|-------------------------|-------------------------------|----------------------------|----------|----------|-------|----------------------------|----|
| Water Model | Instrument # | NE Electra w/ DP6 Probe | Local Area Blgd (cpm) | Quality Control Survey | | | | | |
| | 2383 | 1266 | 53 | 2378 | N/A | N/A | N/A | Local Area Blgd (cpm) | 47 |
| Cal. Due Date | 1/18/01 | 3/28/01 | N/A | 4/18/01 | N/A | N/A | N/A | | |
| Efficiency (std) | 0.21 | 0.210 | N/A | 0.23 | N/A | N/A | N/A | | |
| Total Surface Activity Measurements | | | | | | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Serial # | Date | (cpm) | (dpm/100 cm ²) | |
| 1 | 2383 | 10/18/00 | 6.7 | 6.3 | | | | | |
| 2 | 2383 | 10/18/00 | 4.0 | -6.3 | | | | | |
| 3 | 2383 | 10/18/00 | 3.3 | -8.5 | | | | | |
| 4* | 1262 | 10/30/00 | 3.3 | 9.5 | | | | | |
| 5* | 1262 | 10/30/00 | 4.7 | 18.2 | 2378 | 10/30/00 | 4.7 | 0.2 | |
| 6 | 2383 | 10/18/00 | 5.3 | -0.2 | 2378 | 10/30/00 | 4.0 | -2.8 | |
| 7 | 2383 | 10/18/00 | 11.3 | 27.8 | | | | | |
| 8 | 2383 | 10/18/00 | 7.3 | 9.1 | | | | | |
| 9 | 2383 | 10/18/00 | 8.7 | 15.6 | | | | | |
| 10 | 2383 | 10/18/00 | 9.3 | 18.4 | | | | | |
| 11 | 2383 | 10/18/00 | 11.3 | 27.8 | | | | | |
| 12 | 2383 | 10/18/00 | 7.3 | 9.1 | | | | | |
| 13 | 2383 | 10/18/00 | 3.3 | -8.5 | | | | | |
| 14 | 2383 | 10/18/00 | 10.7 | 25.0 | | | | | |
| 15 | 2383 | 10/18/00 | 6.0 | 3.0 | | | | | |
| | | | MIN | -8.5 | | | | | |
| | | | MAX | 27.8 | | | | | |
| | | | MEAN | 9.5 | | | | | |
| | | | SD | 12.5 | | | | | |
| | | | Transuranic DOGL _W | 100 | | | | | |

* Locations were relocated from the roof to the trailer exterior Initial results were elevated (>100 dpm/100 cm²) due to Po-210 (presented on Page 4 of 5 of this Data Summary)

Best Available Copy

2202

Survey Unit 771030 Total Surface Contamination Results due to Po-210

| Total Surface Activity Survey | | | | Quality Control Survey | | | |
|-------------------------------------|-------------------------|-----------------------|-------------------------------|------------------------------|----------|-----------------------|----------------------------|
| Meter Model: | NE Electra w/ DP6 Probe | Local Area Bkgd (cpm) | | NE Electra w/ DP6 Probe | | Local Area Bkgd (cpm) | |
| Instrument #: | 2383 | N/A | | 2354 | N/A | N/A | 5.3 |
| Cal. Due Date | 1/18/01 | N/A | | 1/28/01 | N/A | N/A | |
| Efficiency (c/g) | 0.21 | N/A | | 0.22 | N/A | N/A | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | |
| Sample Location Number | Serial # | Date | (cpm) | Serial # | Date | (cpm) | (dpm/100 cm ²) |
| 4 | 2383 | 10/18/00 | 34.0 | | | | |
| 5 | 2383 | 10/18/00 | 38.0 | 2354 | 10/17/00 | 36.7 | 141.7 |
| | | | MIN | | | | |
| | | | MAX | | | | |
| | | | MEAN | | | | |
| | | | SD | | | | |
| | | | Transuranic DCG _{LA} | | | | 100 |

Best Available Copy

Survey Unit 771030 Removable Surface Activity Results

| Smear Location Number | Smear Results | | | | | |
|-----------------------|---------------|--------------|-------------------------------|-------------|----------------------------|----|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) | |
| 1 | 1052 | 10/20/00 | 00 | 00 | -0.9 | |
| 2 | 1354 | 10/20/00 | 00 | 00 | 00 | |
| 3 | 1178 | 10/20/00 | 00 | 00 | -0.9 | |
| 4 | 1411 | 10/30/00 | 00 | 00 | -0.6 | |
| 5 | 845 | 10/30/00 | 1.0 | 05 | 1.5 | |
| 6 | 1178 | 10/20/00 | 10 | 05 | 0.6 | |
| 7 | 1052 | 10/20/00 | 00 | 00 | -0.9 | |
| 8 | 1354 | 10/20/00 | 10 | 05 | 1.5 | |
| 9 | 1178 | 10/20/00 | 00 | 00 | -0.9 | |
| 10 | 1052 | 10/20/00 | 00 | 00 | -0.9 | |
| 11 | 1354 | 10/20/00 | 10 | 05 | 1.5 | |
| 12 | 1178 | 10/20/00 | 00 | 00 | -0.9 | |
| 13 | 1052 | 10/20/00 | 00 | 00 | -0.9 | |
| 14 | 1354 | 10/20/00 | 00 | 00 | 0.0 | |
| 15 | 1178 | 10/20/00 | 10 | 05 | 0.6 | |
| | | | | MIN | -0.9 | |
| | | | | MAX | 1.5 | |
| | | | | MEAN | -0.1 | |
| | | | | SD | 10 | |
| | | | Transuranic DCGL _w | | | 20 |

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ATTACHMENT AA

Survey Unit Maps

Best Available Copy

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
BUILDING: 772

SURVEY UNIT 771001

CLASSIFICATION: 3

SURVEY UNIT DESCRIPTION: 772 EXTERIOR

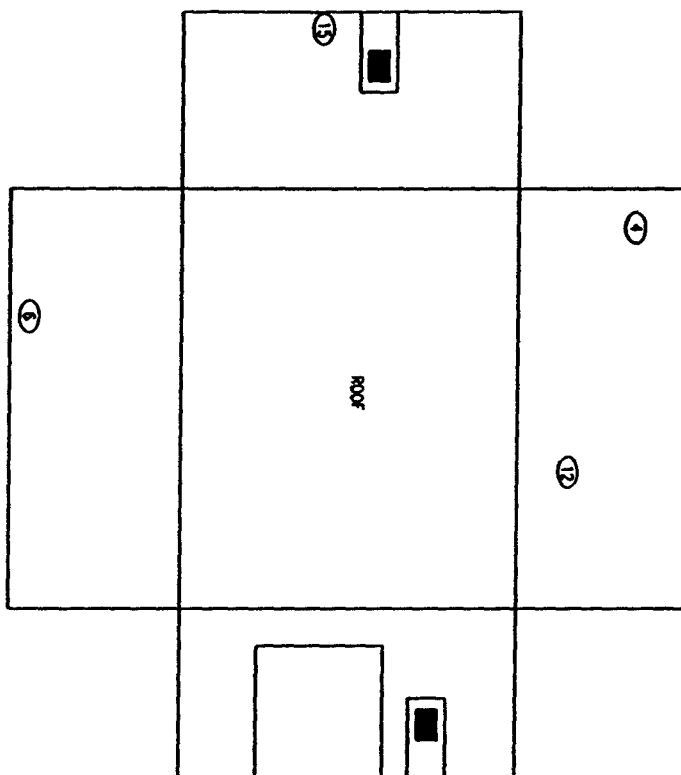
TOTAL ROOF AREA 105 62 M²

TOTAL AREA 303 90 M²

GRID SIZE N/A

SURVEY UNIT 772 - MAP 1 OF 2

772



204



| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| | SHEAR & TSC LOCATION |
| | SHEAR, TSC, & SAMPLE LOCATION |
| | OPEN/INACCESSIBLE AREA |
| | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA:

BUILDING: 772

SURVEY UNIT DESCRIPTION: 772 INTERIOR

TOTAL FLOOR AREA: 94.12 M²

SURVEY UNIT: 771001

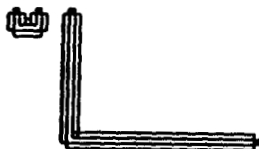
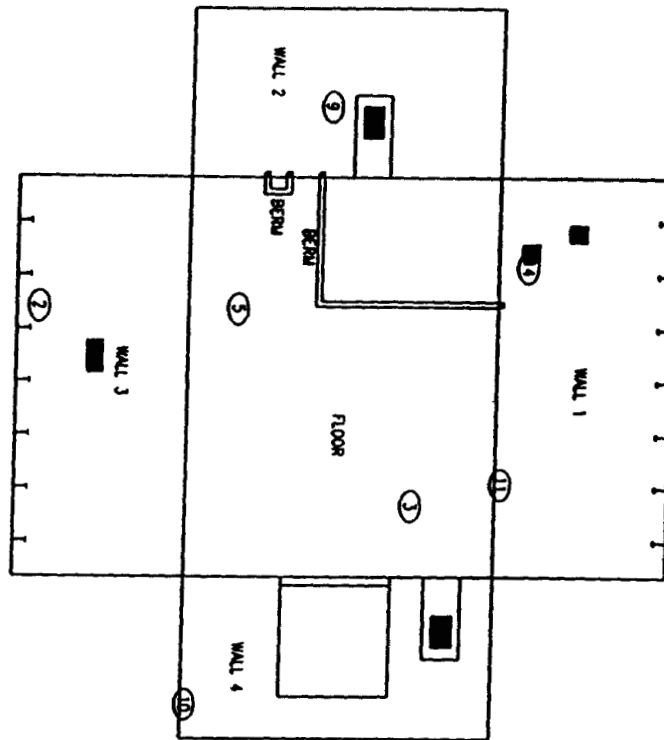
TOTAL AREA: 271.03 M²

CLASSIFICATION: 3

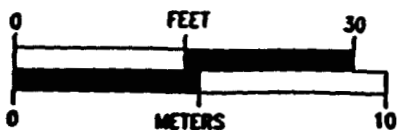
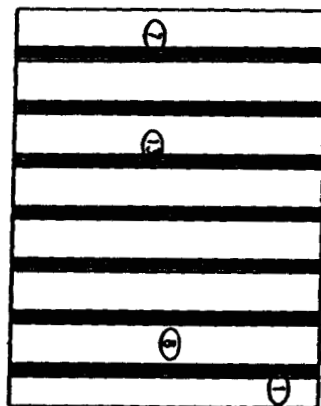
GRID SIZE: N/A

SURVEY UNIT 772 - MAP 2 OF 2

772



CEILING
(IMAGED)



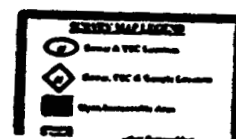
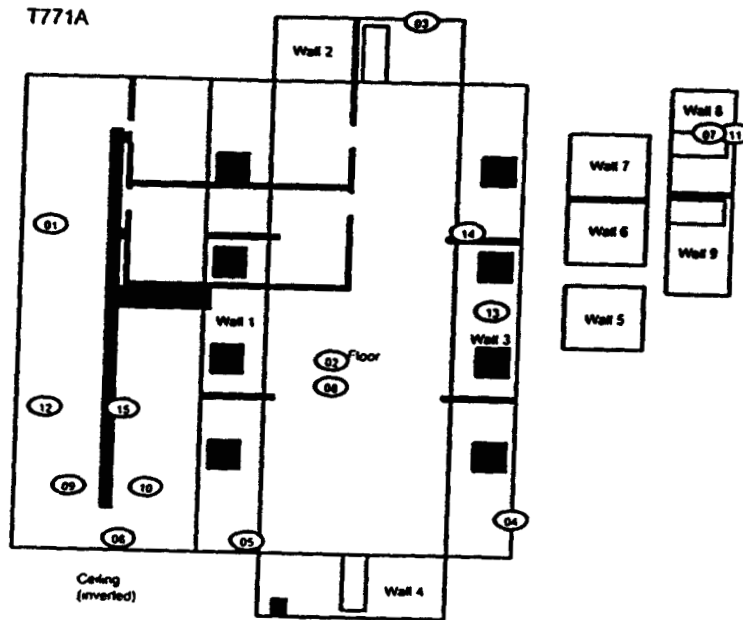
SURVEY MAP LEGEND

- ① SHEAR & TSC LOCATION
- ② SHEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771002 Classification: 3
 Building: T771A
 Survey Unit Description: T771A Interior
 Total Floor Area: 127 sq. m Total Area: 396 sq. m Grid Size: N/A

SURVEY UNIT 771002 - MAP 1 OF 1

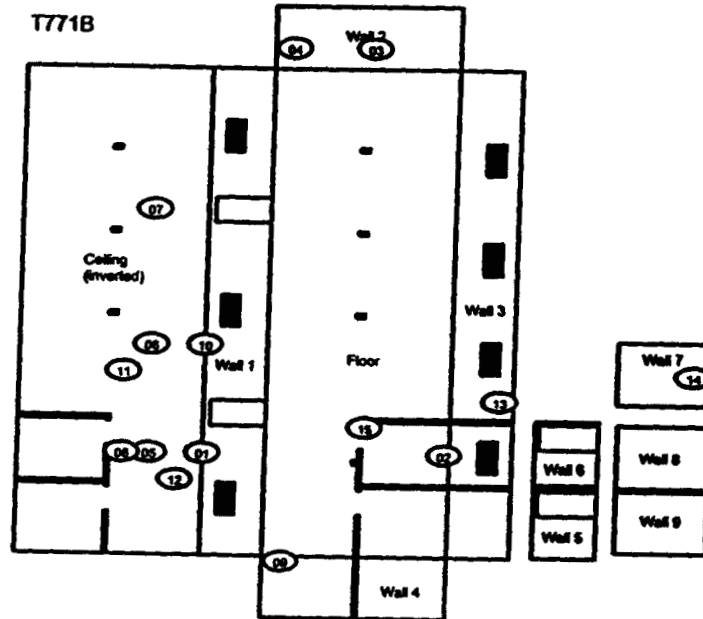


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RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771003 Classification: 3
 Building: T771B
 Survey Unit Description: T771B Interior
 Total Floor Area: 122 sq. m Total Area: 386 sq. m Grid Size: N/A

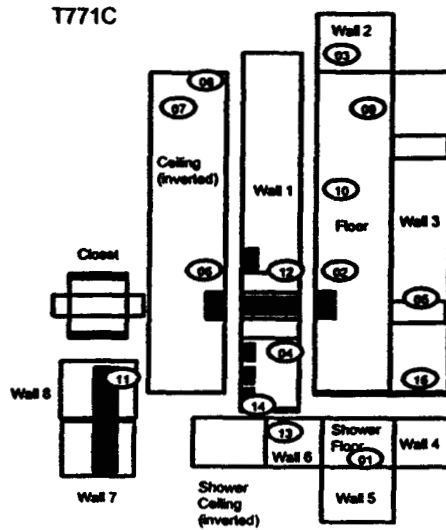
SURVEY UNIT 771003 - MAP 1 OF 1



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771004 Classification: 3
 Building: T771C
 Survey Unit Description: T771C Interior
 Total Floor Area: 37.3 sq. m Total Area: 150 sq. m Grid Size: N/A

SURVEY UNIT 771004 - MAP 1 OF 1



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ

Survey Unit: 771005

Classification: 3

Building: T771E

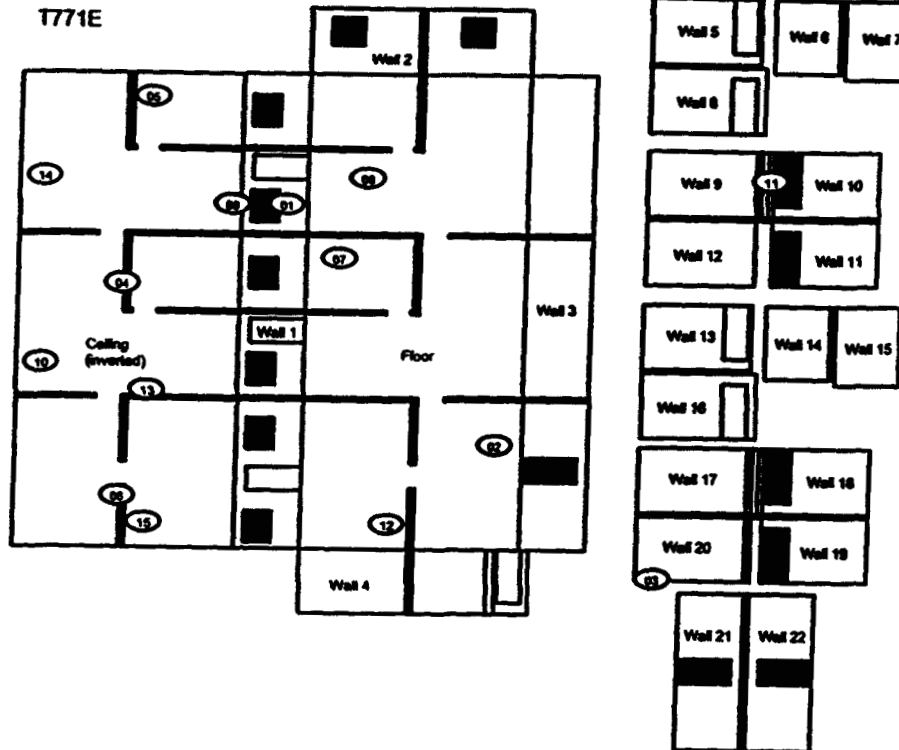
Survey Unit Description: T771E Interior

Total Floor Area: 141 sq. m

Total Area: 563 sq. m

Grid Size: N/A

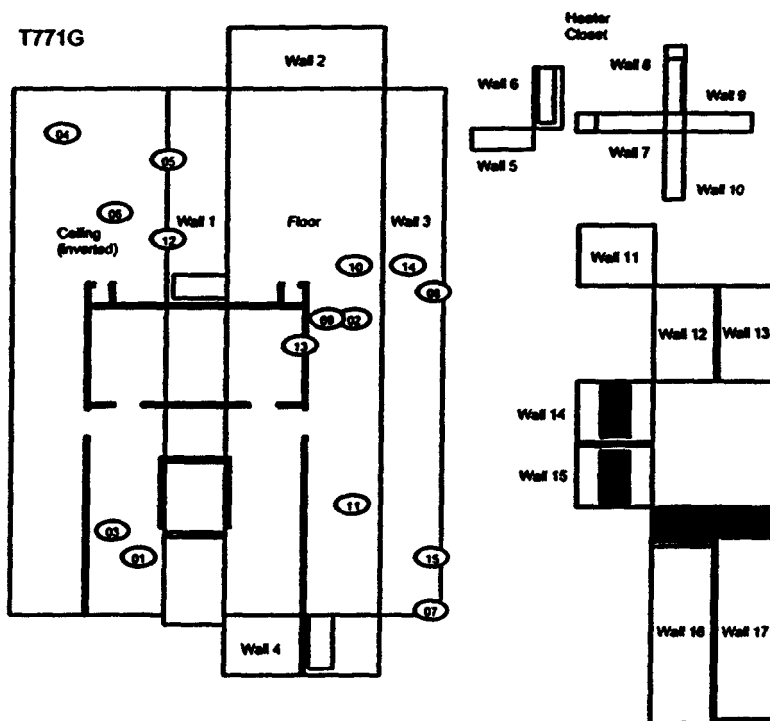
SURVEY UNIT 771005 - MAP 1 OF 1



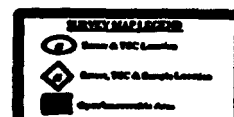
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771006 Classification: 3
 Building: T771G
 Survey Unit Description: T771G Interior
 Total Floor Area: 112 sq. m Total Area: 418 sq. m Grid Size: N/A

SURVEY UNIT 771006 - MAP 1 OF 1



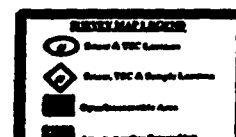
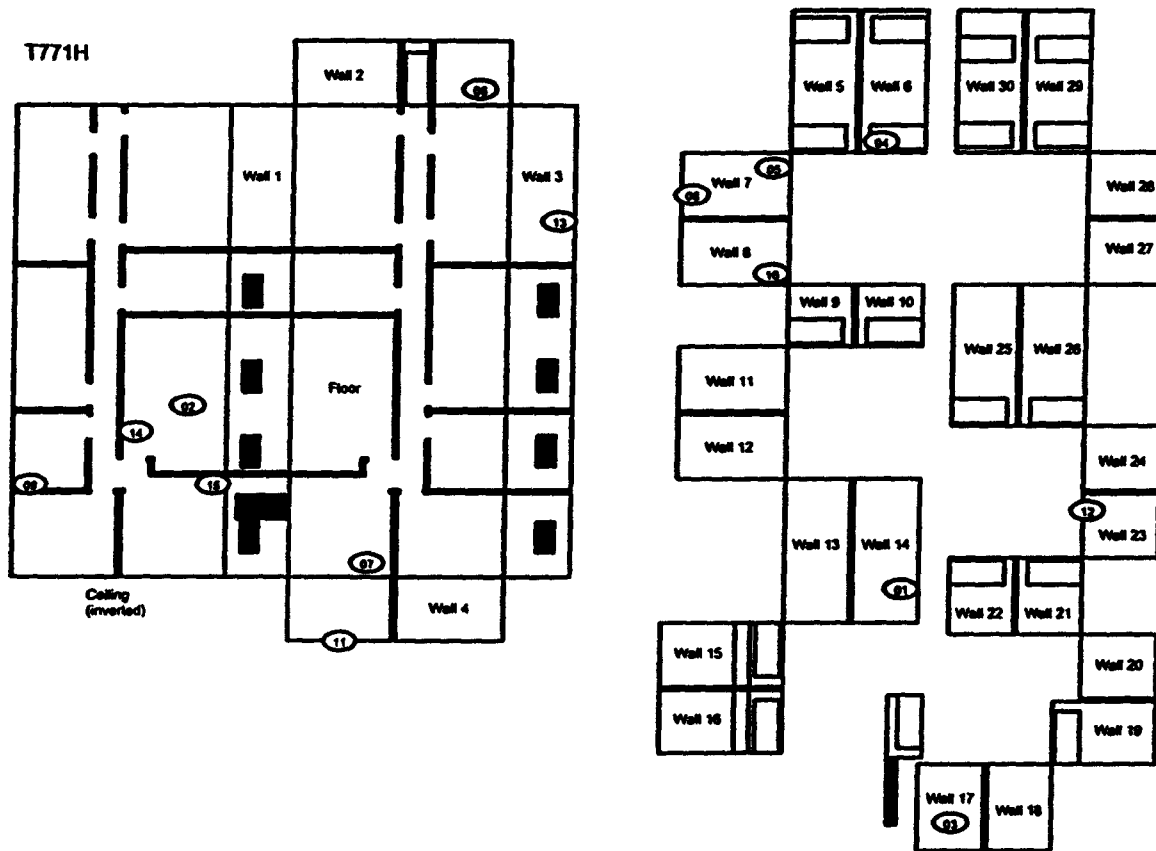
210



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771007 Classification: 3
 Building: T771H
 Survey Unit Description: T771H Interior
 Total Floor Area: 140 sq. m Total Area: 651 sq. m Grid Size: N/A

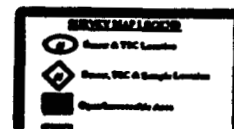
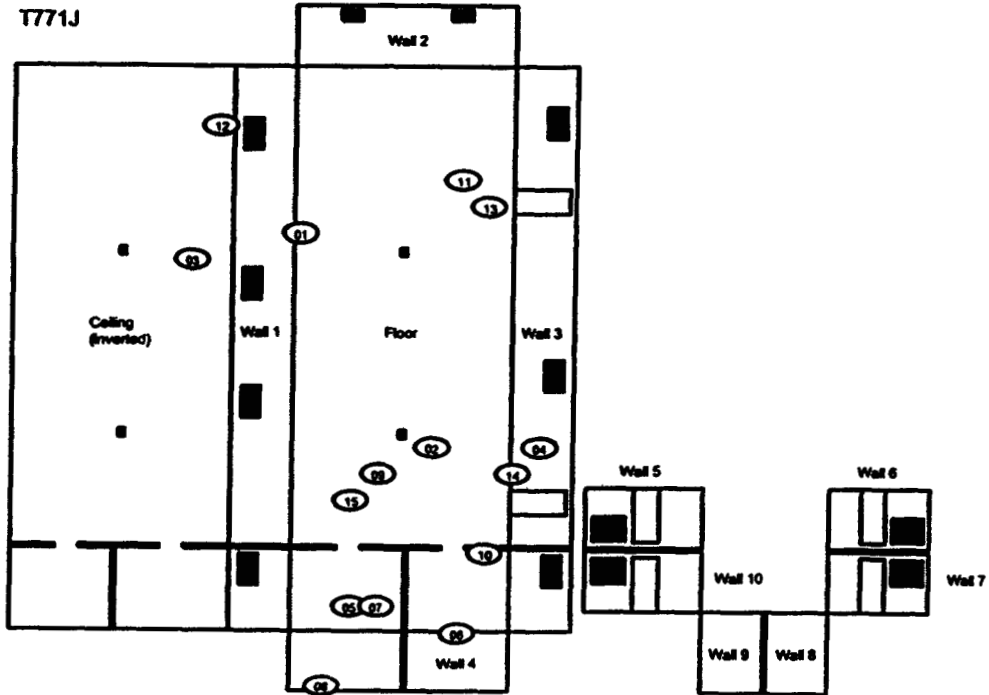
SURVEY UNIT 771007 - MAP 1 OF 1



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771008 Classification: 3
 Building: T771J
 Survey Unit Description: T771J Interior
 Total Floor Area: 170 sq. m Total Area: 512 sq. m Grid Size: N/A

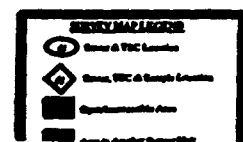
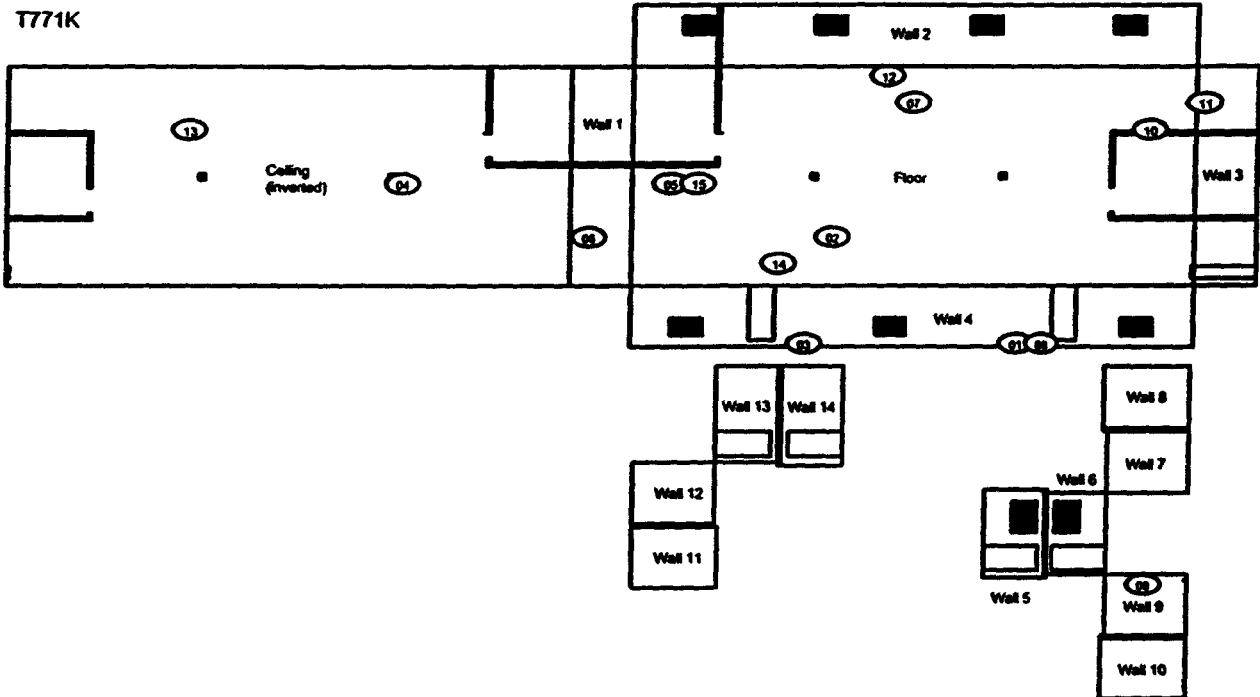
SURVEY UNIT 771008 - MAP 1 OF 1



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771009 Classification: 3
 Building: T771K
 Survey Unit Description: T771K Interior
 Total Floor Area: 169 sq. m Total Area: 537 sq. m Grid Size: N/A

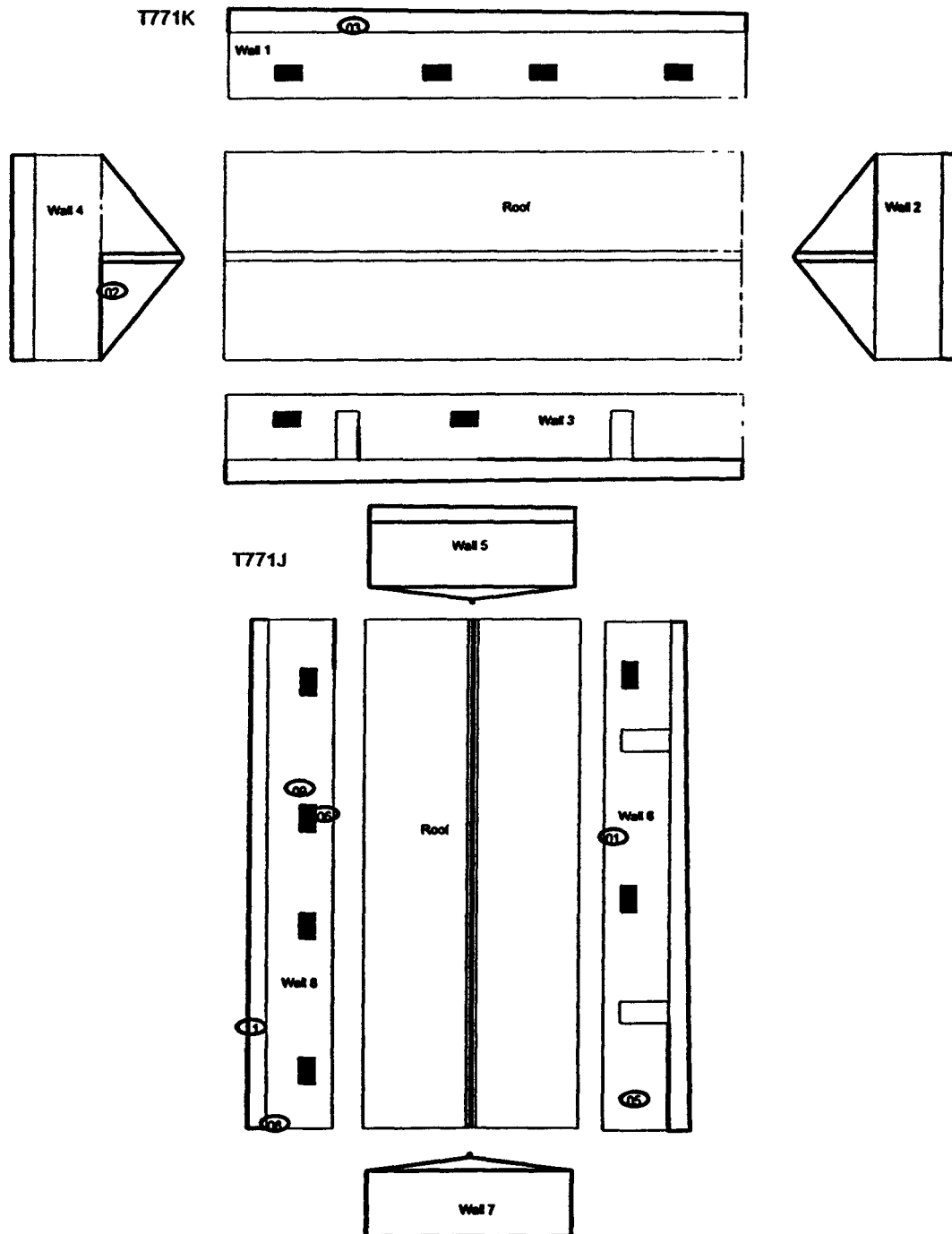
SURVEY UNIT 771009 - MAP 1 OF 1



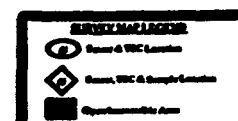
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: Survey Unit: 771010 Classification: 2
 Building: 771
 Survey Unit Description: 771 Trailers K, J, E, H External Surfaces
 Total Floor Area: NA sq. m Total Area: 1216 sq. m Grid Size: N/A

SURVEY UNIT 771010 - MAP 1 OF 2



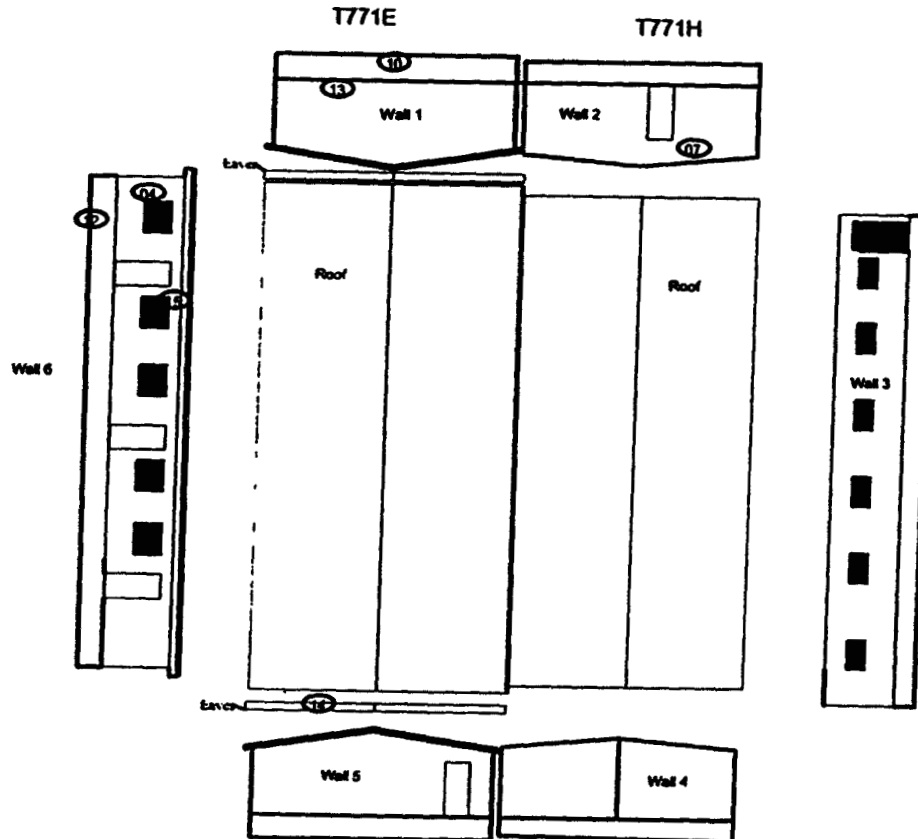
214



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

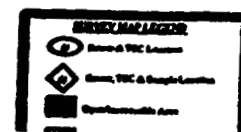
Survey Area: AJ Survey Unit: 771010 Classification: 3
 Building: 771
 Survey Unit Description: 771 Trailers K, J, E, H External Surfaces
 Total Floor Area: NA sq. m Total Area: 1216 sq. m Grid Size: N/A

SURVEY UNIT 771010 - MAP 2 OF 2



0 FEET 30

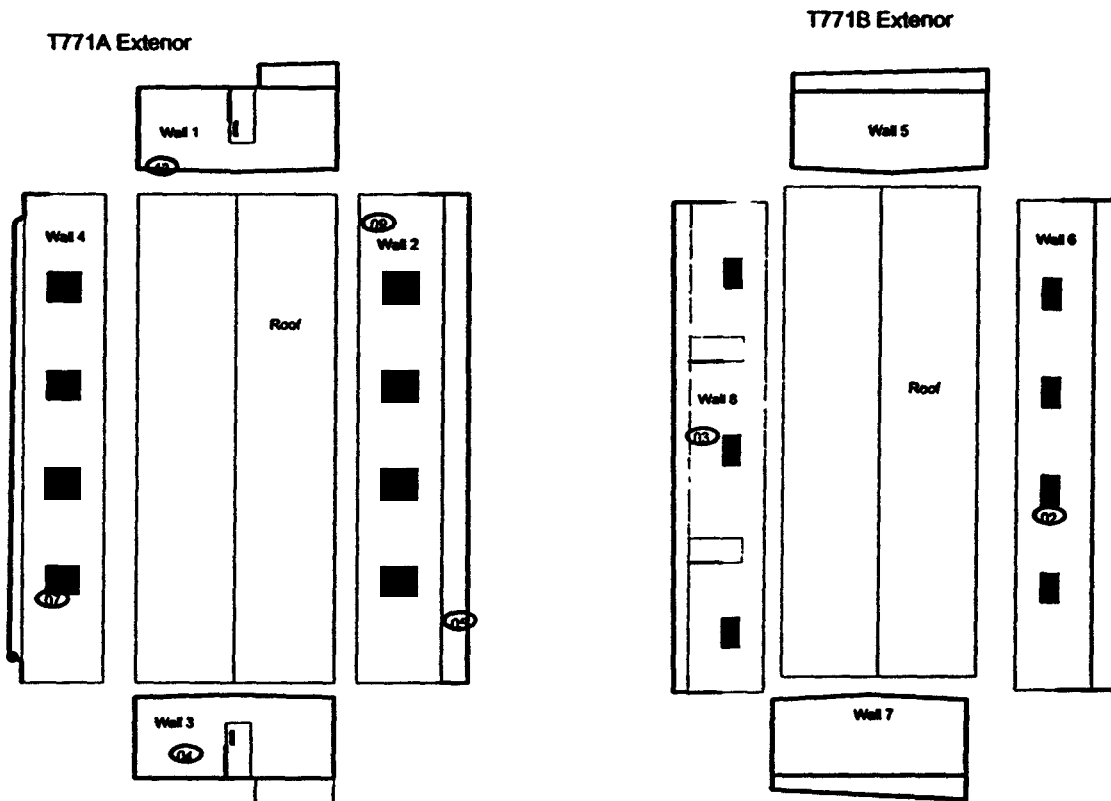
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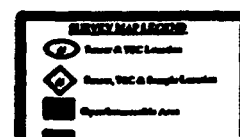
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771011 Classification: 3
 Building: T771 A, B, C, G
 Survey Unit Description: T771 A, B Exterior
 Total Floor Area: NA Total Area: 1106 sq. m Grid Size: N/A

SURVEY UNIT 771011 - MAP 1 OF 2



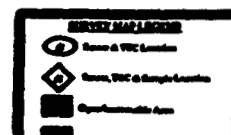
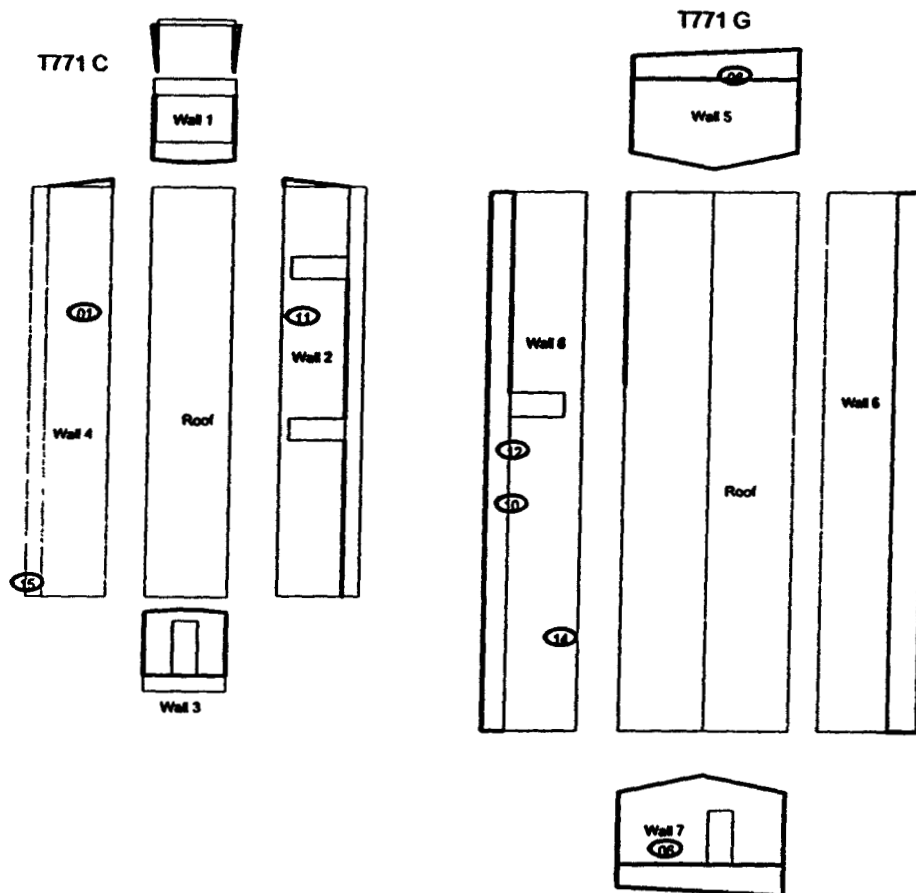
216



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771011 Classification: 3
 Building: T771 A, B, C, G
 Survey Unit Description: T771 C, G Exterior
 Total Floor Area: NA Total Area: 1106 sq. m Grid Size: N/A

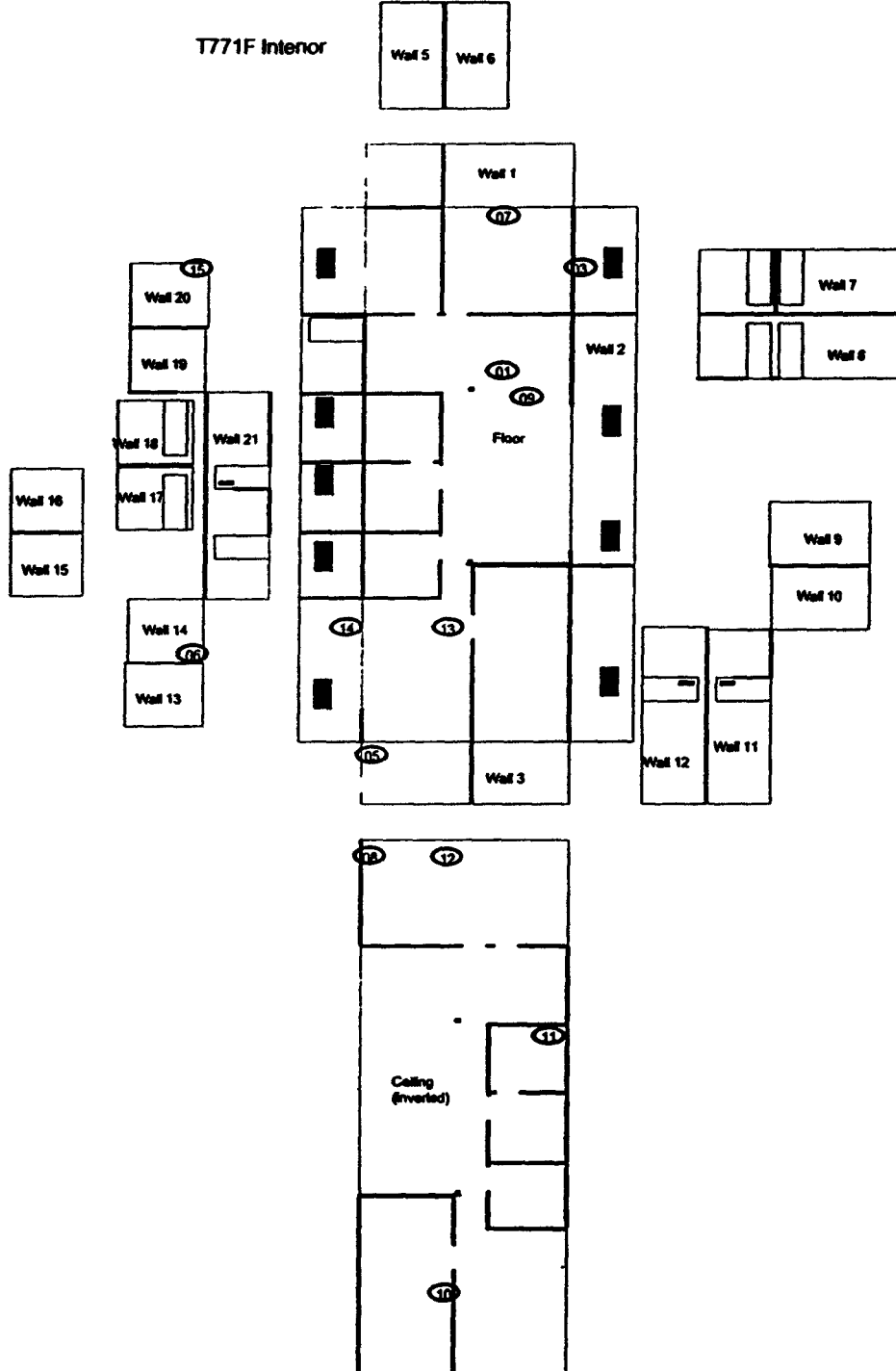
SURVEY UNIT 771011 - MAP 2 OF 2



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771012 Classification: 3
 Building: 771
 Survey Unit Description: T771F Interior/Exterior
 Total Floor Area: 162 sq. m Total Area: 1031 sq. m Grid Size: N/A

SURVEY UNIT 771012 - MAP 1 OF 2

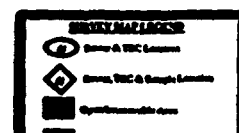
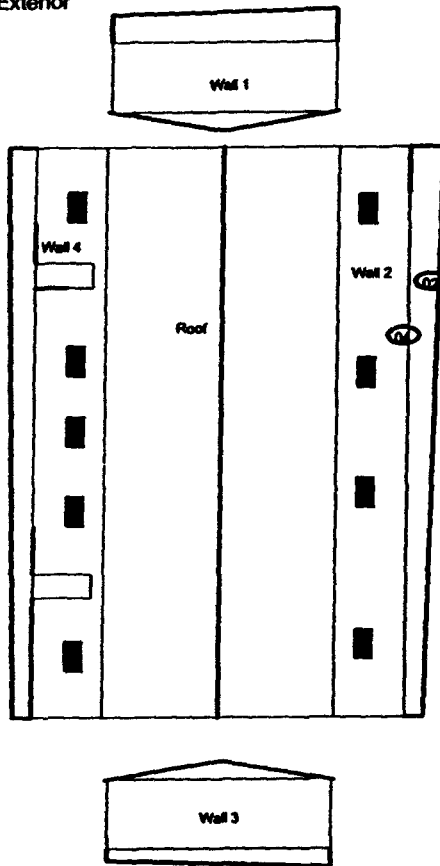


RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771012 Classification: 3
 Building: 771
 Survey Unit Description: T771F Interior/Exterior
 Total Floor Area: 162 sq. m Total Area: 1031 sq. m Grid Size: N/A

SURVEY UNIT 771012 - MAP 2 OF 2

T771F Exterior



219

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ

Survey Unit: 771013

Classification: 3

Building: 771

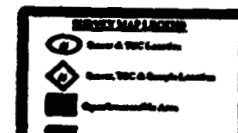
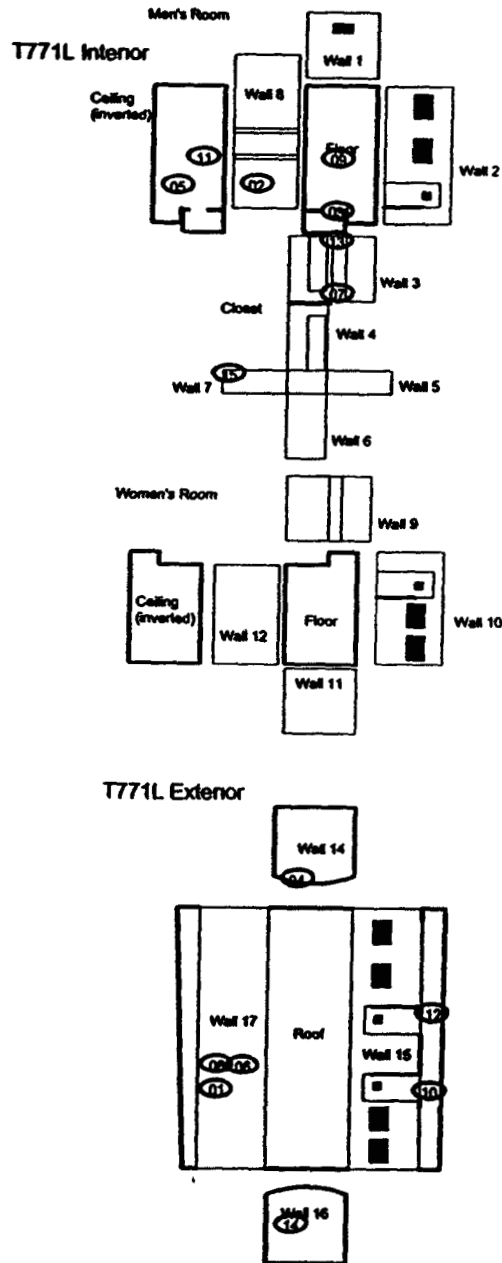
Survey Unit Description: T771L Interior/Exterior

Total Floor Area: 24 sq. m

Total Area: 240 sq. m

Grid Size: N/A

SURVEY UNIT 771013 - MAP 1 OF 1

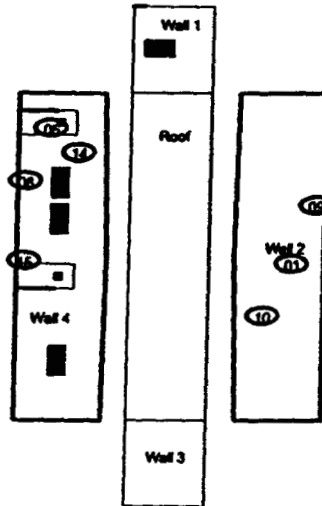


RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

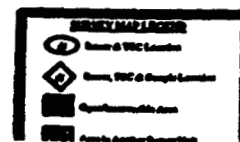
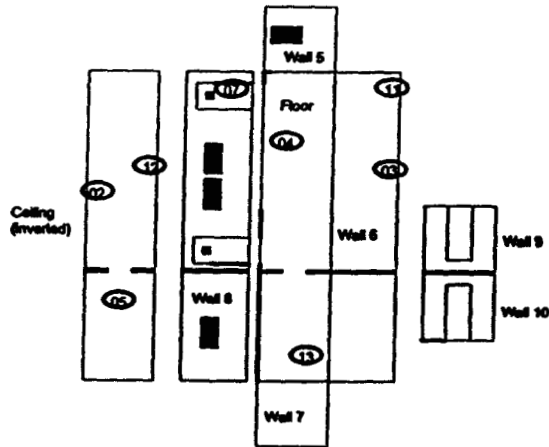
Survey Area: AJ Survey Unit: 771014 Classification: 3
 Building: T771MB
 Survey Unit Description: T771MB Exterior/Interior
 Total Floor Area: 30 sq. m Total Area: 271 sq. m Grid Size: N/A

SURVEY UNIT 771014 - MAP 1 OF 1

T771MB Exterior



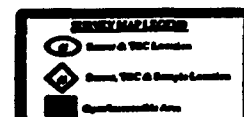
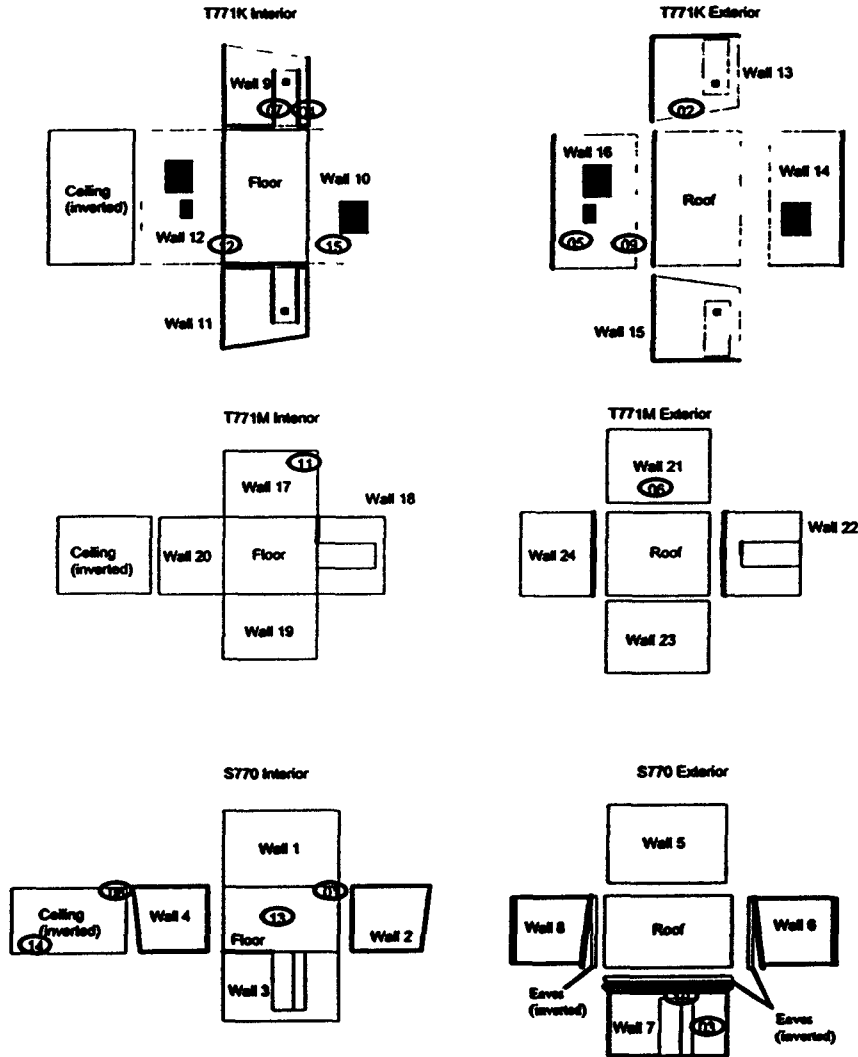
T771MB Interior



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771015 Classification: 3
 Building: T771M, T771K, S770
 Survey Unit Description: Exterior/Interior
 Total Floor Area: 35 sq. m Total Area: 349 sq. m Grid Size: N/A

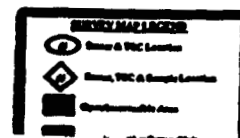
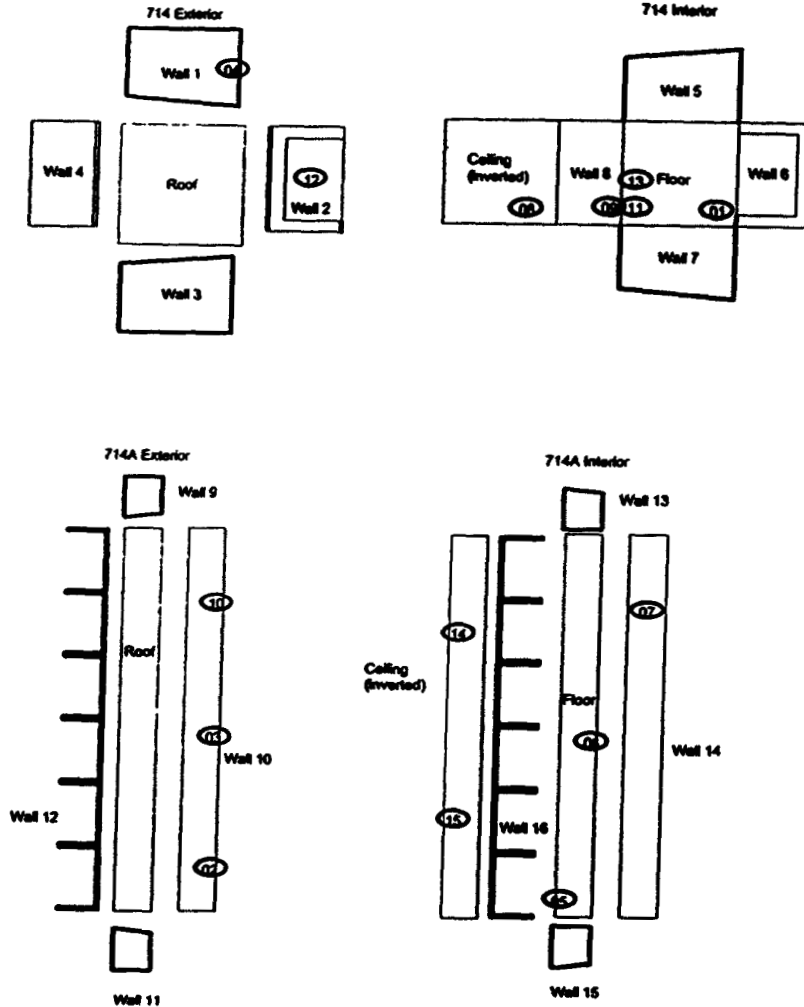
SURVEY UNIT 771015 - MAP 1 OF 1



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771016 Classification: 3
 Building: 714/714A
 Survey Unit Description: 714/714A Interior/ Exterior
 Total Floor Area: 35 sq. m Total Area: 248 sq. m Grid Size: N/A

SURVEY UNIT 771016 - MAP 1 OF 1

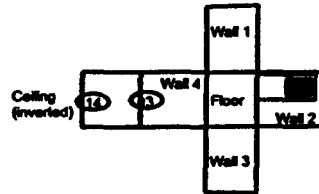


RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

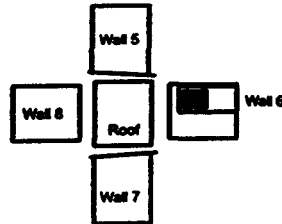
Survey Area: AJ **Survey Unit:** 771017 **Classification:** 3
Building: 716, 717
Survey Unit Description: 715, 716, 717 Exterior & Interior
Total Floor Area: 85 sq. m **Total Area:** 742 sq. m **Grid Size:** N/A

SURVEY UNIT 771017 - MAP 1 OF 2

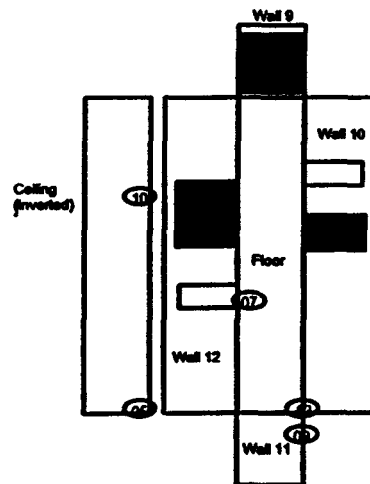
717 Interior



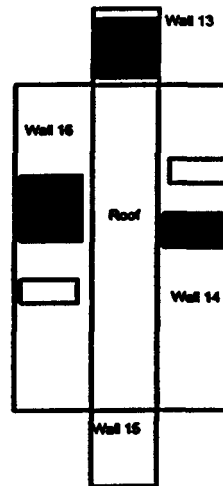
717 Exterior



716 Interior



716 Exterior

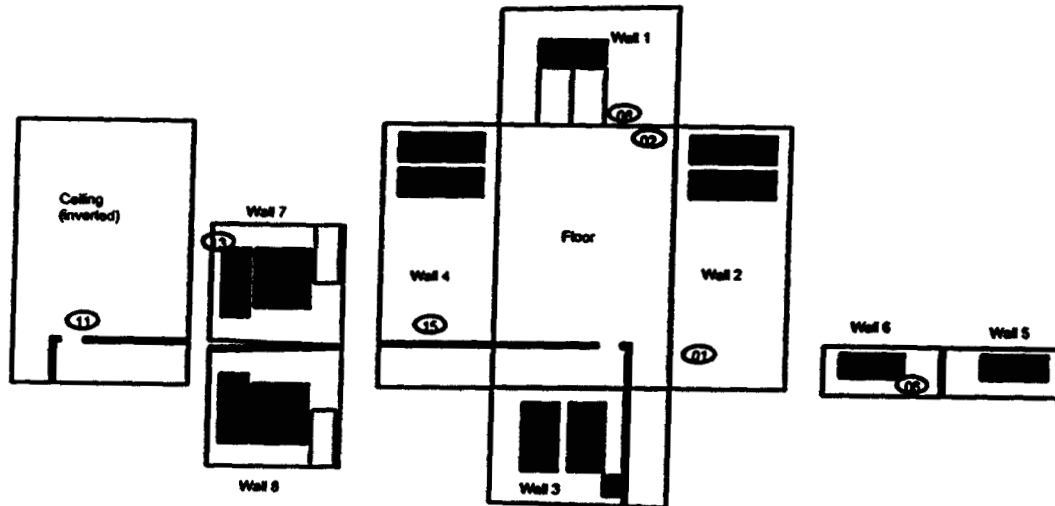


RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

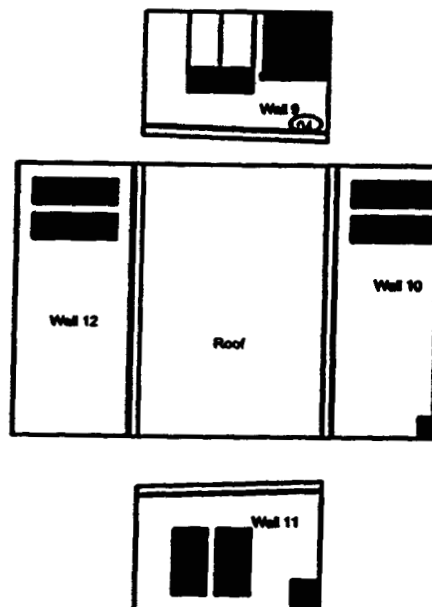
Survey Area: AJ Survey Unit: 771017 Classification: 3
 Building: 715
 Survey Unit Description: 715, 716, 717 Exterior & Interior
 Total Floor Area: 95 sq. m Total Area: 742 sq. m Grid Size: N/A

SURVEY UNIT 771017 - MAP 2 OF 2

715 Interior



715 Exterior

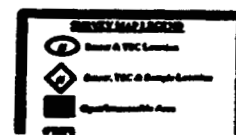
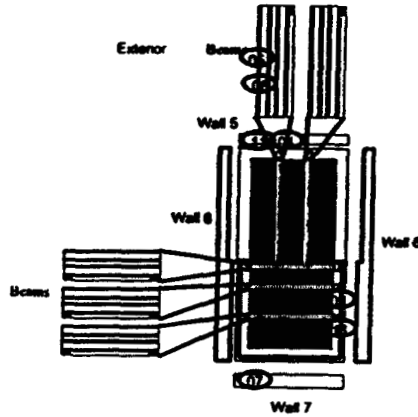
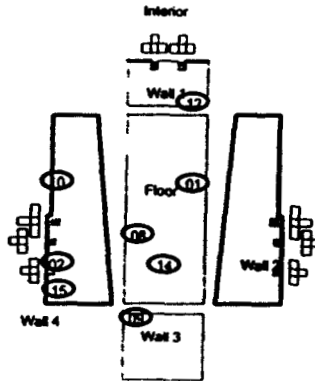


RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771018 Classification: 3
 Building: 772A
 Survey Unit Description: 772A Interior/Exterior
 Total Floor Area: 21 sq. m Total Area: 96 sq. m Grid Size: N/A

SURVEY UNIT 771018 - MAP 1 OF 1

772A

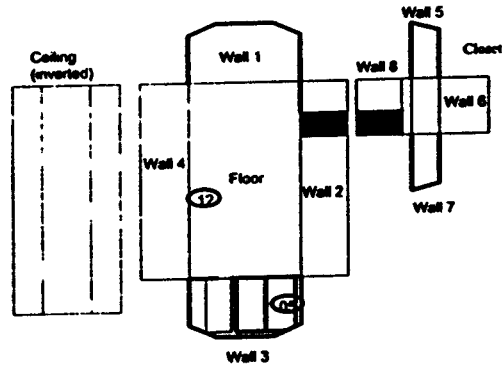


RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

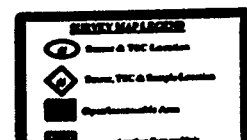
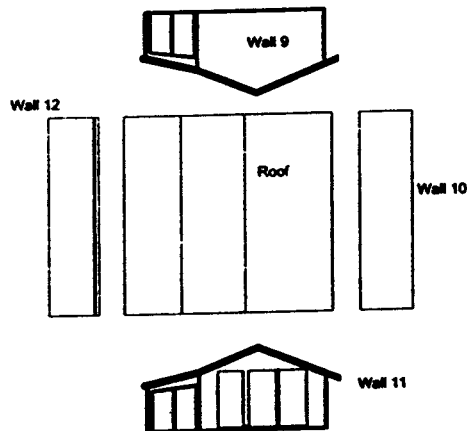
Survey Area: AJ Survey Unit: 771019 Classification: 3
 Building: 771B/770
 Survey Unit Description: 771B Interior/Exterior
 Total Floor Area: 303 sq. m Total Area: 2094 sq. m Grid Size: NA

SURVEY UNIT 771019 - MAP 1 OF 4

771B Interior



771B Exterior



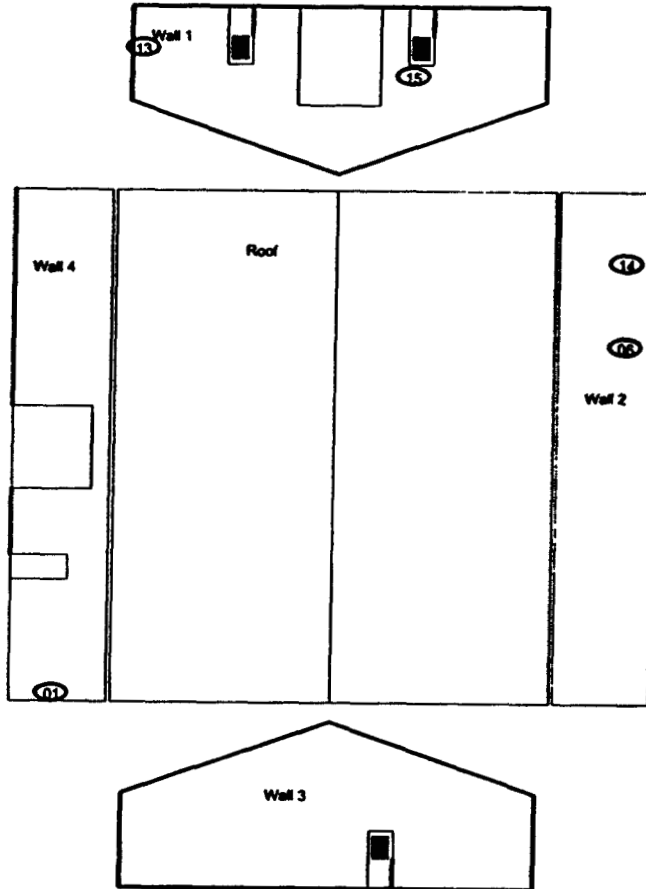
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771019 Classification: 3
Building: 771B/770
Survey Unit Description: 770 Exterior

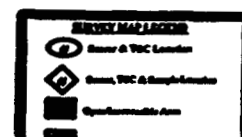
Total Floor Area: 303 sq. m Total Area: 2094 sq. m Grid Size: N/A

SURVEY UNIT 771019 - MAP 2 OF 4

770 Exterior



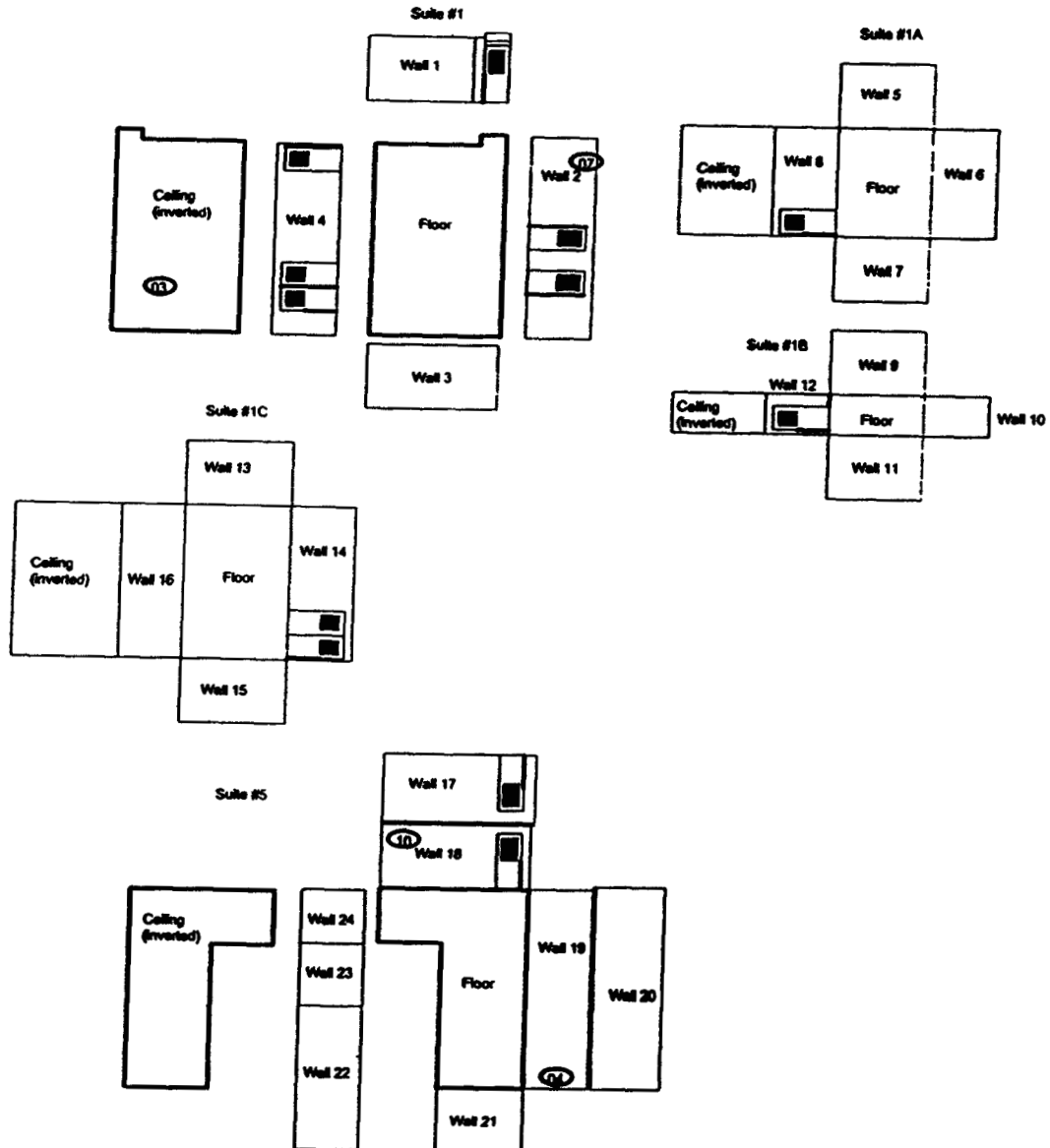
222



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771019 Classification: 3
 Building: 771B / 770
 Survey Unit Description: 770 Interior
 Total Floor Area: 303 sq. m Total Area: 2094 sq. m Grid Size: N/A

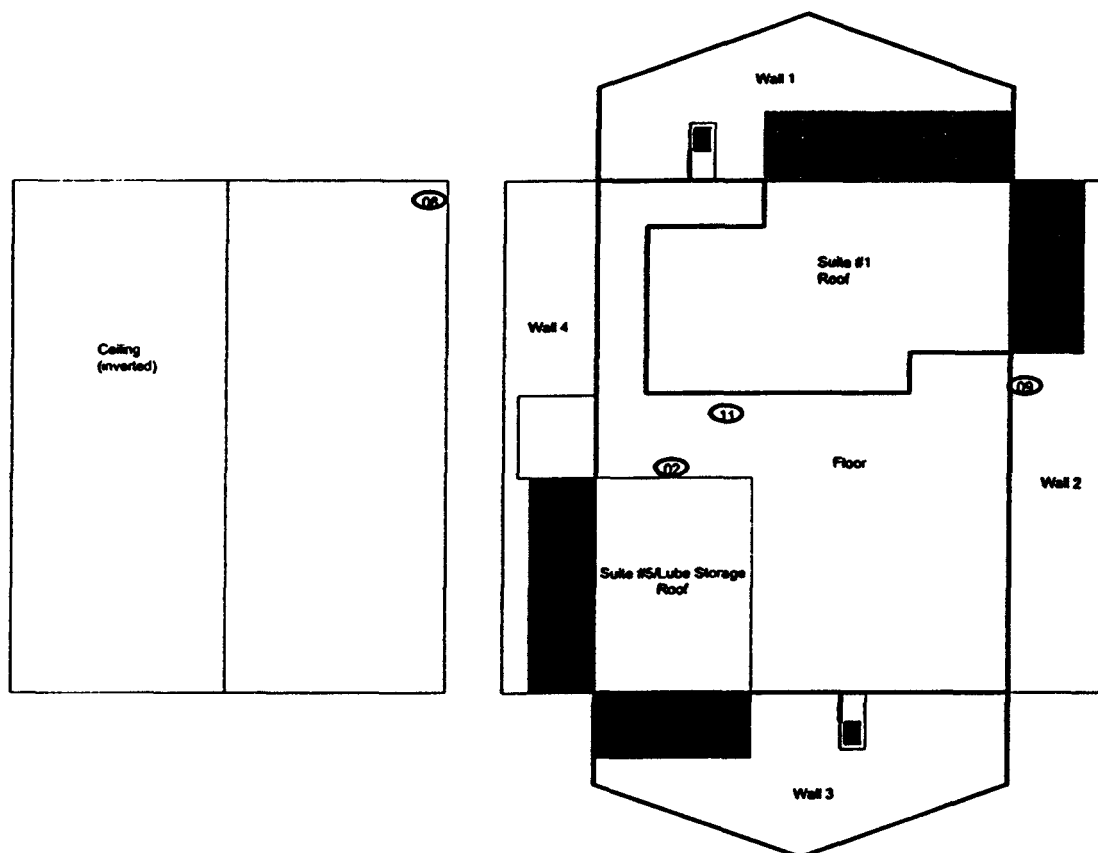
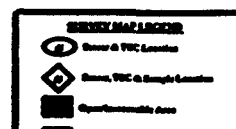
SURVEY UNIT 771019 - MAP 3 OF 4



Survey Area: AJ **Survey Unit:** 771019 **Classification:** 3
Building: 771B / 770
Survey Unit Description: 770 Interior

Total Floor Area: 303 sq. m **Total Area:** 2094 sq. m **Grid Size:** N/A

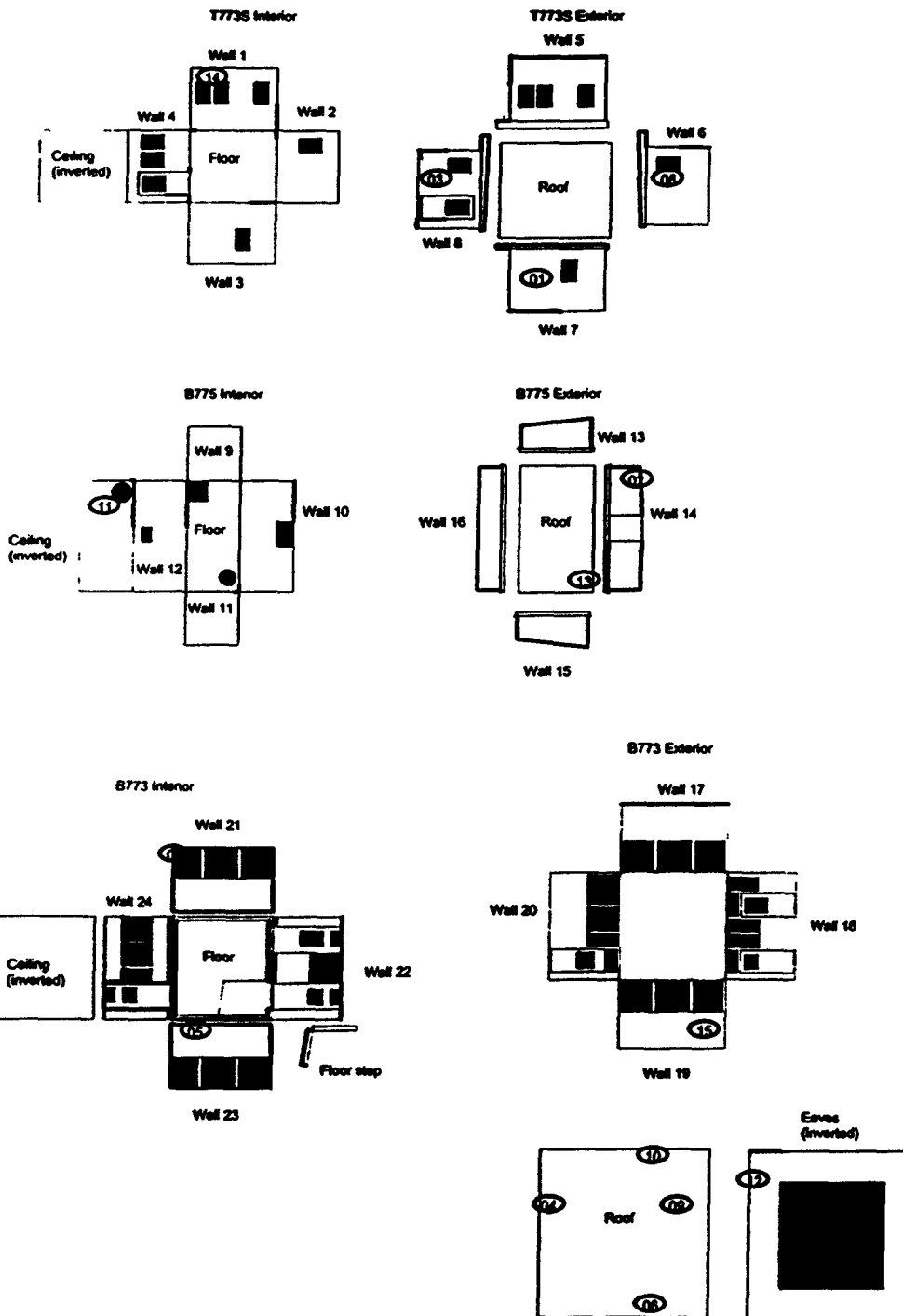
770 Interior

 2^{30} 

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771020 Classification: 3
 Building: B773, T773S, B775
 Survey Unit Description: Exterior/Interior
 Total Floor Area: 33 sq. m Total Area: 300 sq. m Grid Size: N/A

SURVEY UNIT 771020 - MAP 1 OF 1



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
BUILDING 8790

SURVEY UNIT 771021

CLASSIFICATION: 3

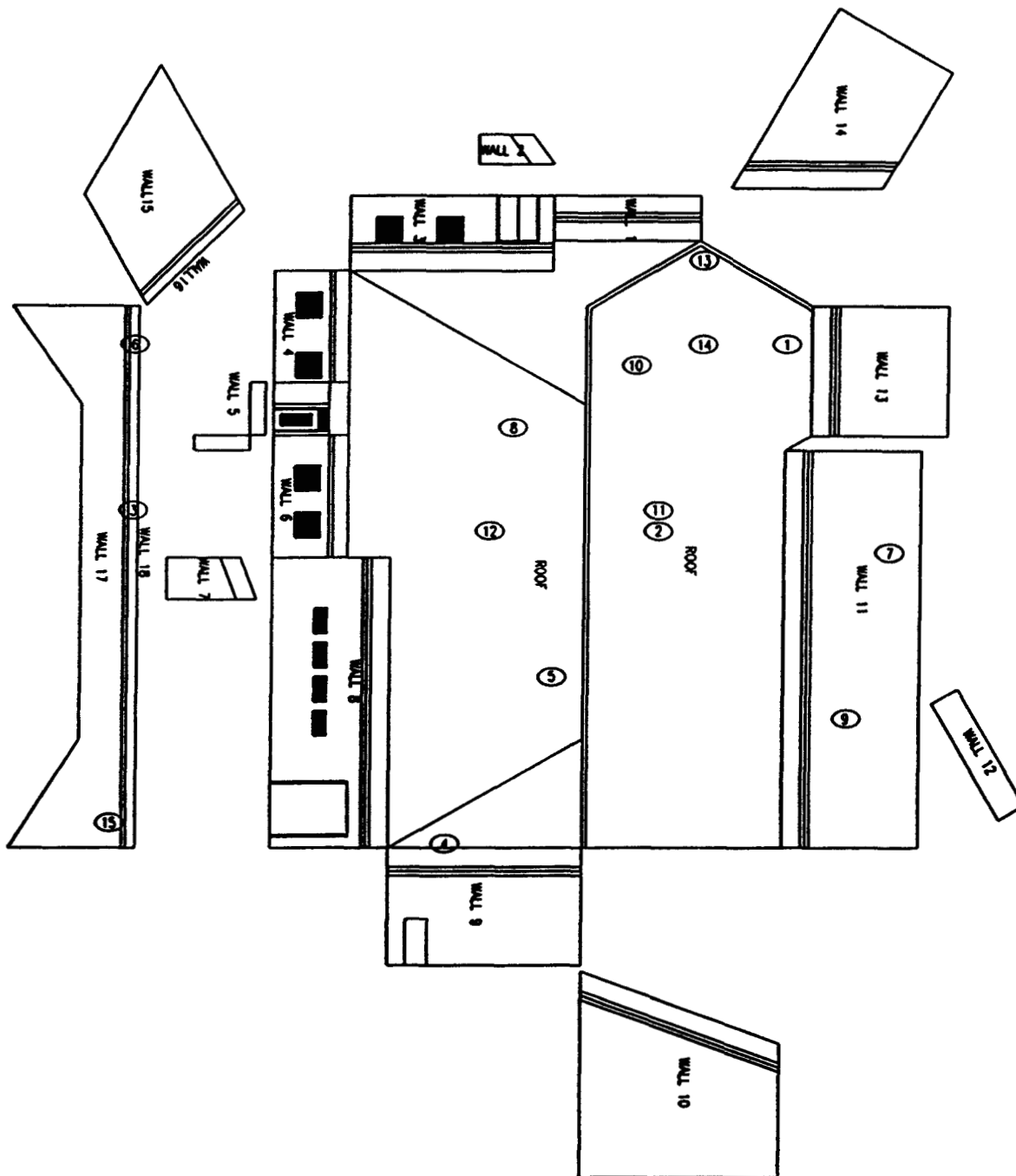
SURVEY UNIT DESCRIPTION: BUILDING 790 EXTERIOR

TOTAL ROOF AREA 768.33 M²

TOTAL AREA 1483.67 M²

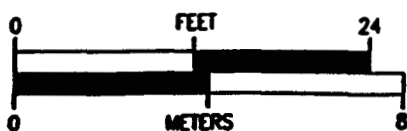
GRID SIZE: N/A

SURVEY UNIT 771 - MAP 1 OF 1



SURVEY MAP LEGEND

- ① SHEAR & TSC LOCATION
- ② SHEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ

Survey Unit: 771022

Classification: 3

Building: B790

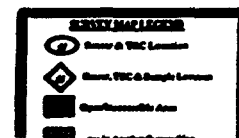
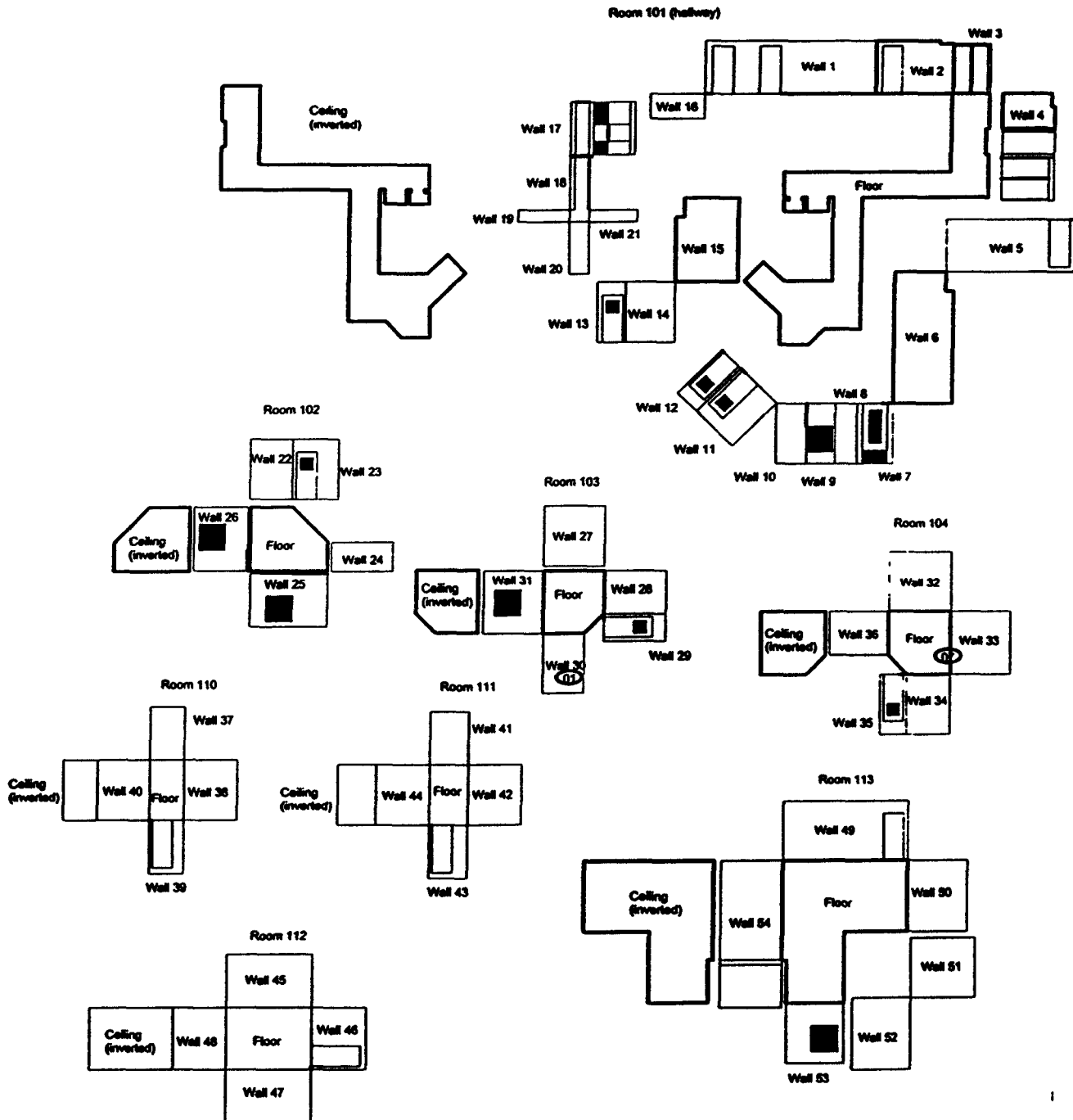
Survey Unit Description: Interior

Total Floor Area: 501 sq. m

Total Area: 2473 sq. m

Grid Size: N/A

SURVEY UNIT 771022 - MAP 1 OF 5



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

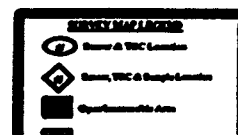
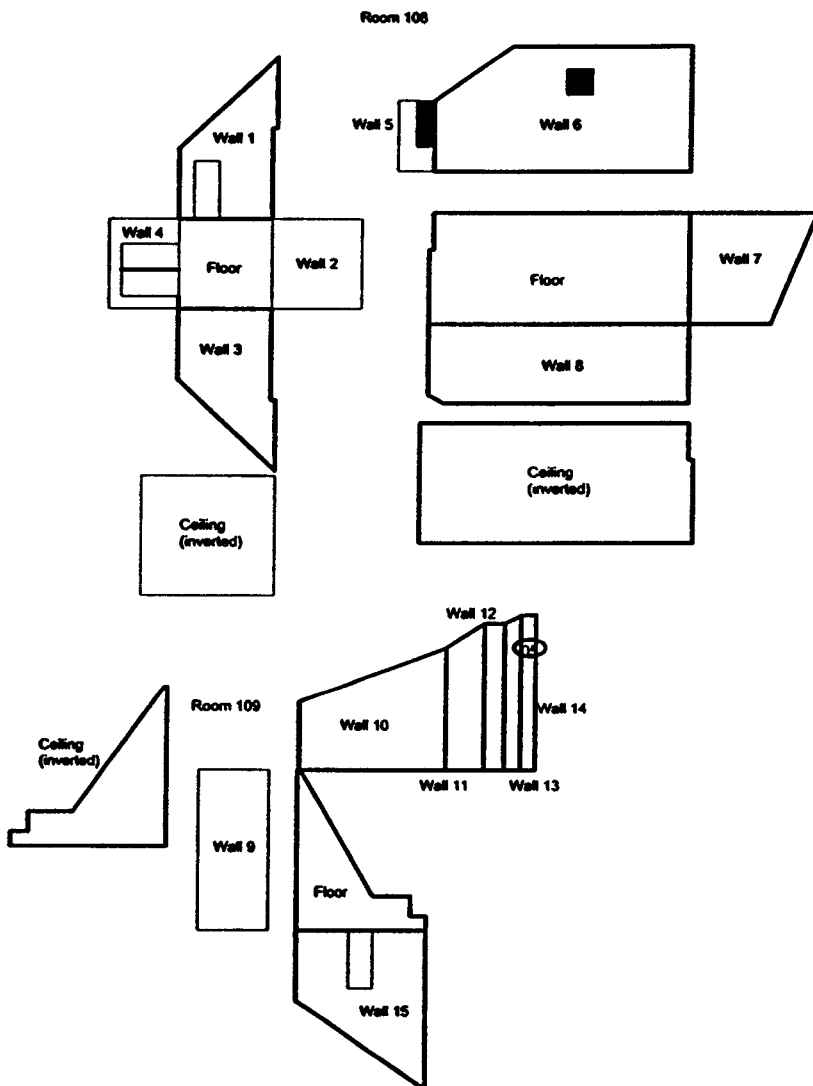
Survey Area: AJ Survey Unit: 771022 Classification: 3

Building: B790

Survey Unit Description: Interior

Total Floor Area: 501 sq. m Total Area: 2473 sq. m Grid Size: N/A

SURVEY UNIT 771022 - MAP 2 OF 5

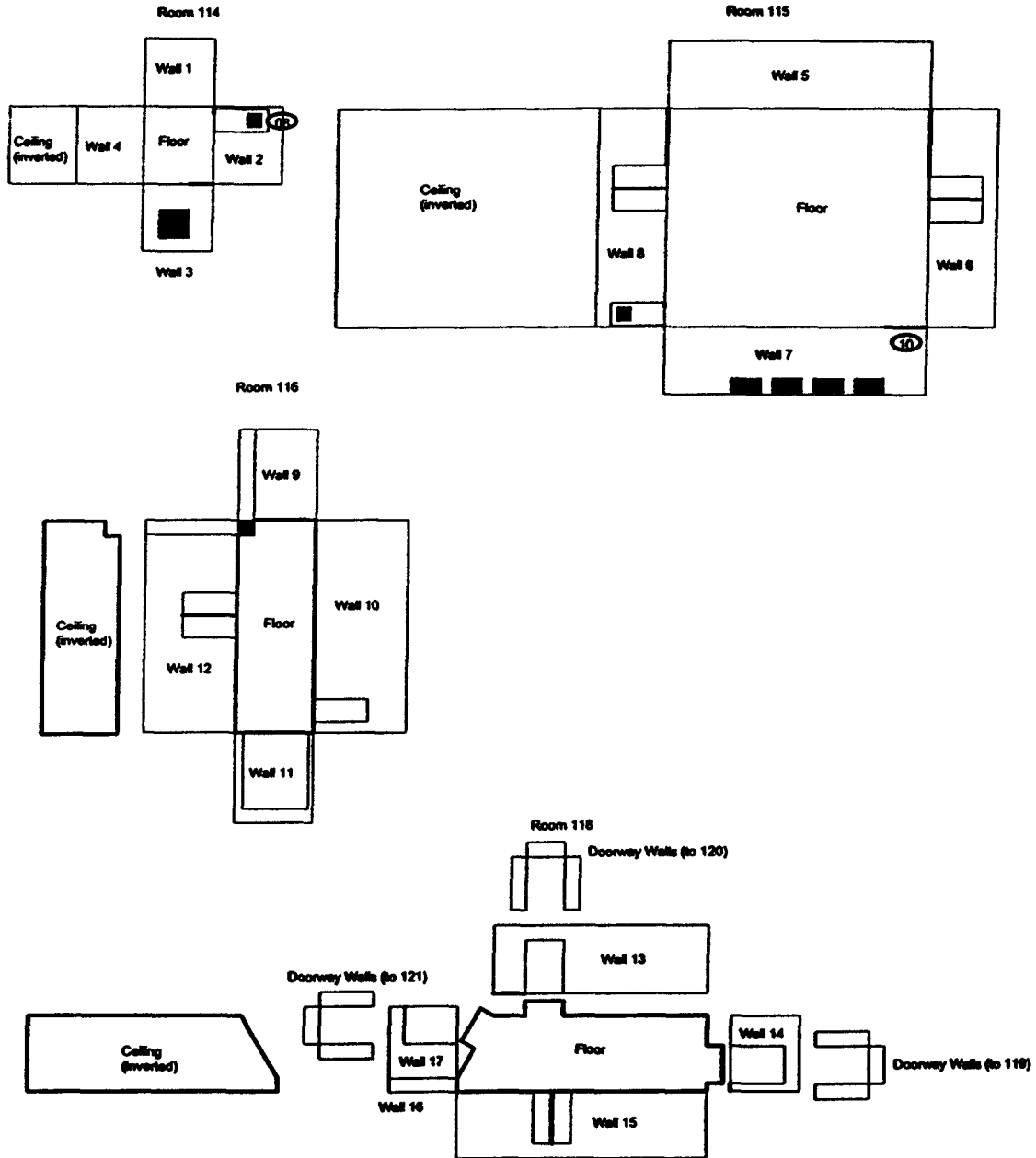


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RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771022 Classification: 3
 Building: B790
 Survey Unit Description: Interior
 Total Floor Area: 501 sq. m Total Area: 2473 sq. m Grid Size: N/A

SURVEY UNIT 771022 - MAP 3 OF 5



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ

Survey Unit: 771022

Classification: 3

Building: 8790

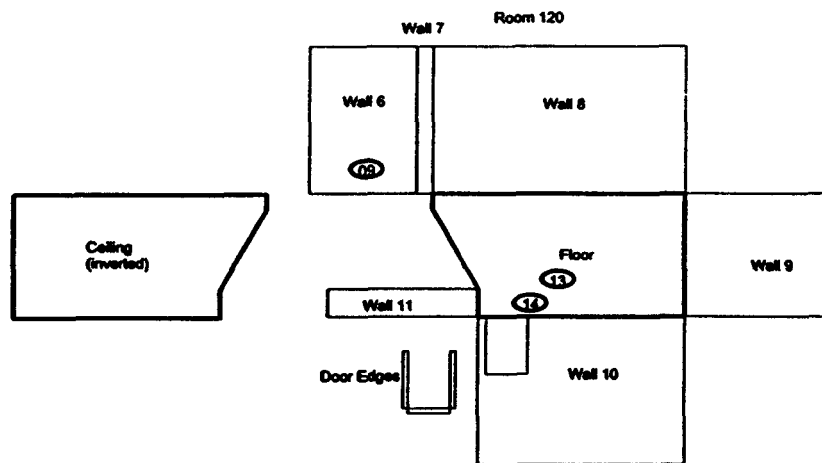
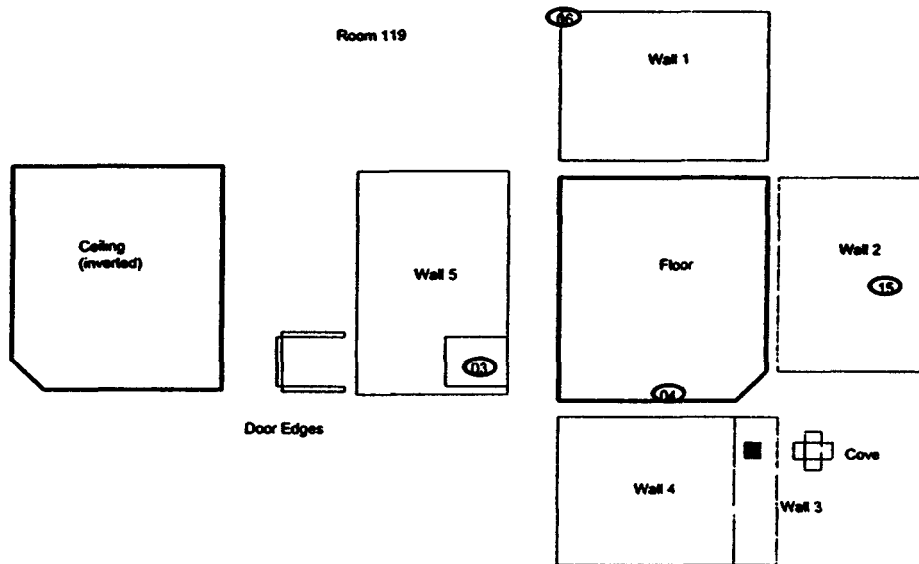
Survey Unit Description: Interior

Total Floor Area: 501 sq. m

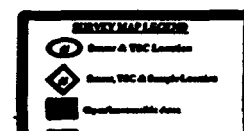
Total Area: 2473 sq. m

Grid Size: N/A

SURVEY UNIT 771022 - MAP 4 OF 5



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RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ

Survey Unit: 771022

Classification: 3

Building: B790

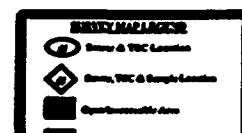
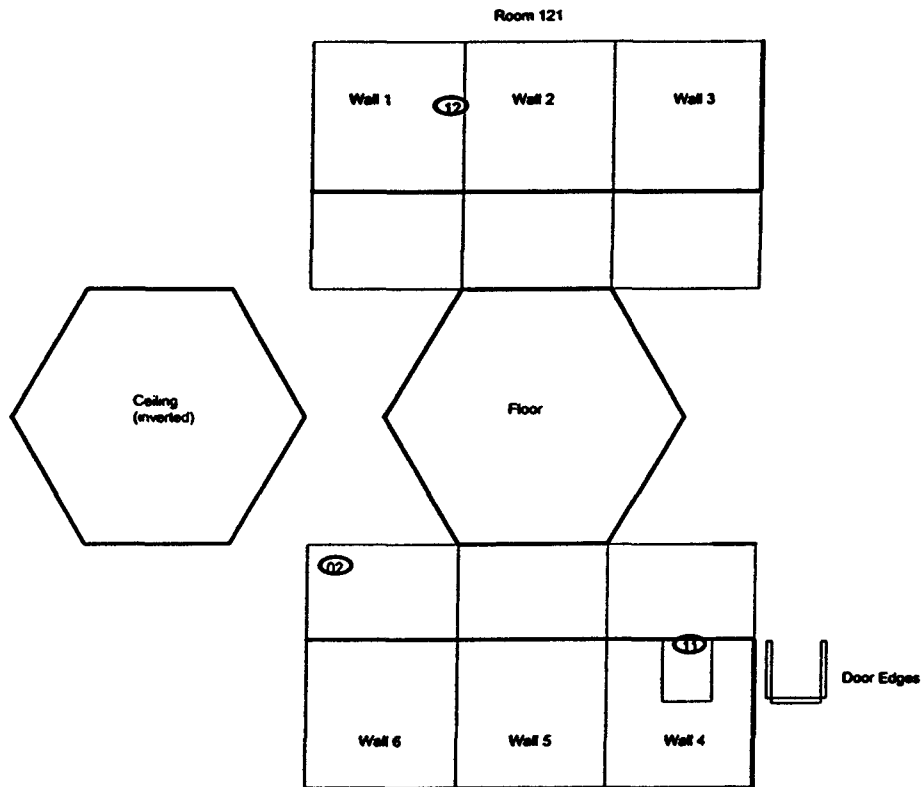
Survey Unit Description: Interior

Total Floor Area: 501 sq. m

Total Area: 2473 sq. m

Grid Size: N/A

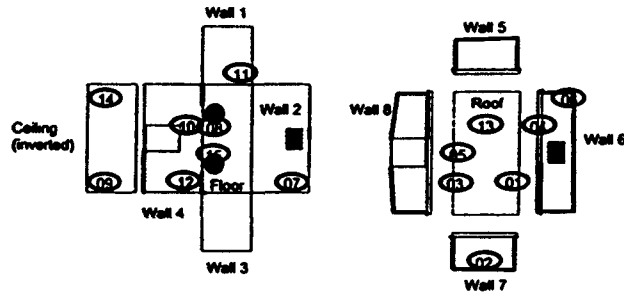
SURVEY UNIT 771022 - MAP 5 OF 5



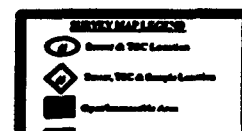
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AJ Survey Unit: 771023 Classification: 2
 Building: 5728
 Survey Unit Description: Exterior/Interior
 Total Floor Area: 7 sq. m Total Area: 67 sq. m Grid Size: N/A

SURVEY UNIT 771023 - MAP 1 OF 1



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RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-774B (0107)

SURVEY UNIT 771024

CLASSIFICATION. 3

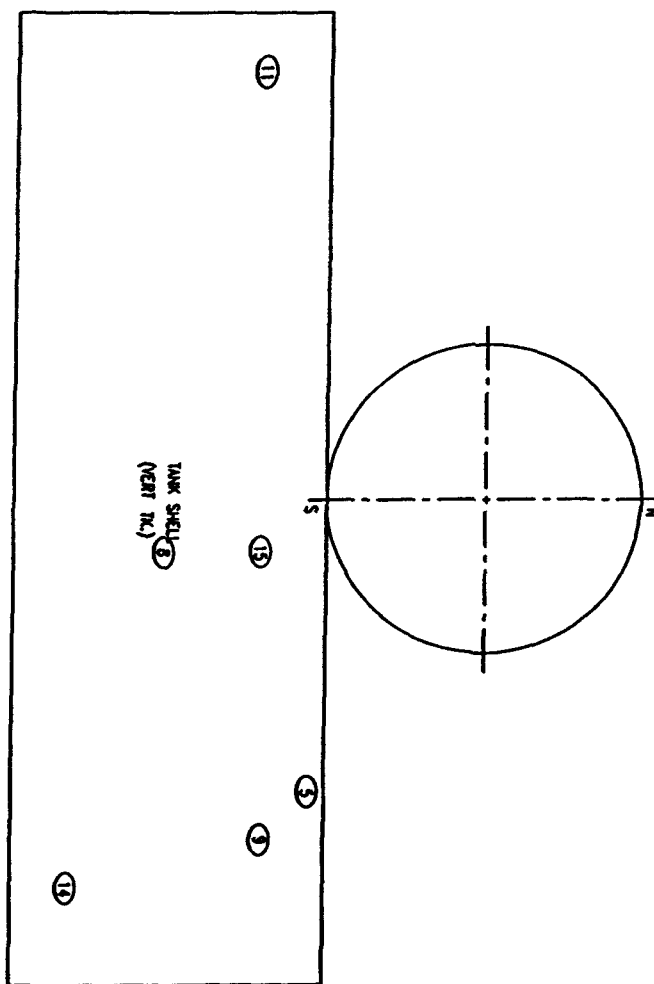
SURVEY UNIT DESCRIPTION. STEAM CONDENSATE HOLDING TANK EXTERIOR

TOTAL FLOOR AREA N/A

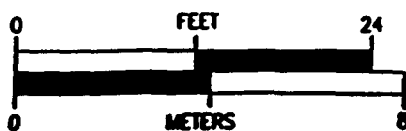
TOTAL AREA: 161.47 M²

GRID SIZE. N/A

SURVEY UNIT 771024 - MAP 1 OF 7



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| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| | SMEAR & TSC LOCATION |
| | SMEAR, TSC, & SAMPLE LOCATION |
| | OPEN/INACCESSIBLE AREA |
| | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA

TANK, T-21A

SURVEY UNIT DESCRIPTION DIESEL OIL STORAGE TANK EXTERIOR

TOTAL FLOOR AREA, N/A

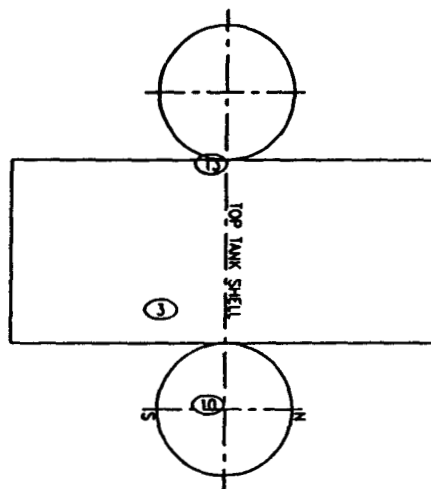
SURVEY UNIT 771024

TOTAL AREA 44.77 M²

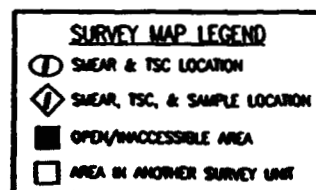
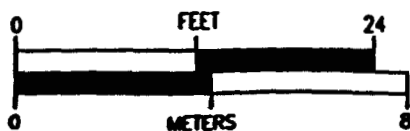
CLASSIFICATION: 3

GRID SIZE N/A

SURVEY UNIT 771024 - MAP 2 OF 7



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RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA:

SURVEY UNIT 771024

CLASSIFICATION: 3

TANK: T-182 (#66)

SURVEY UNIT DESCRIPTION: WASTE TANK COVER

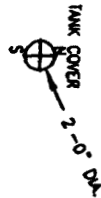
TOTAL FLOOR AREA: N/A

TOTAL AREA: .30 M²

GRID SIZE: N/A

SURVEY UNIT 771024 - MAP 3 OF 7

NOTE:
TANK IS LOCATED UNDER CONCRETE SLAB.



SURVEY MAP LEGEND

- ① SHEAR & TSC LOCATION
- ◇ SHEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-183 (J67)

SURVEY UNIT 771024

CLASSIFICATION 3

SURVEY UNIT DESCRIPTION WASTE TANK COVER

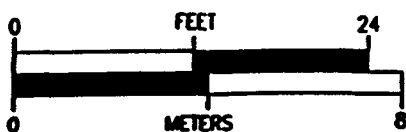
TOTAL FLOOR AREA: N/A

TOTAL AREA .30 M²

GRID SIZE: N/A

SURVEY UNIT 771024 - MAP 4 OF 7

NOTE:
TANK IS LOCATED UNDER CONCRETE SLAB.



SURVEY MAP LEGEND

- ① SMEAR & TSC LOCATION
- ◊ SMEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-194

SURVEY UNIT: 771024

CLASSIFICATION: 3

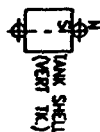
SURVEY UNIT DESCRIPTION: HF STORAGE TANK EXTERIOR

TOTAL FLOOR AREA: N/A

TOTAL AREA: .96 M²

GRID SIZE: N/A

SURVEY UNIT 771024 - MAP 5 OF 7



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SURVEY MAP LEGEND

- ① SHEAR & TSC LOCATION
- ② SHEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-195

SURVEY UNIT 771024

CLASSIFICATION 3

SURVEY UNIT DESCRIPTION: HF STORAGE TANK EXTERIOR

TOTAL FLOOR AREA N/A

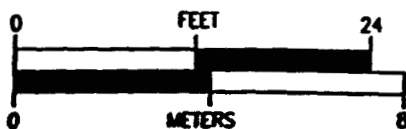
TOTAL AREA .88 M²

GRID SIZE N/A

SURVEY UNIT 771024 - MAP 6 OF 7



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| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| ① | SHEAR & TSC LOCATION |
| ⬠ | SHEAR, TSC, & SAMPLE LOCATION |
| ■ | OPEN/INACCESSIBLE AREA |
| □ | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-197

SURVEY UNIT. 771024

CLASSIFICATION. 3

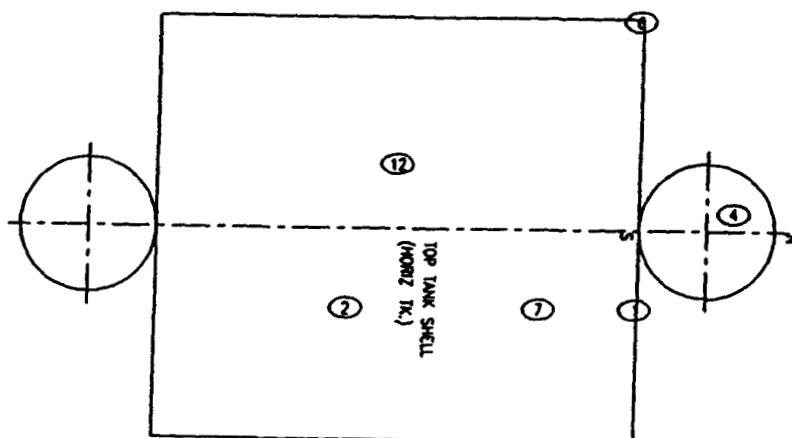
SURVEY UNIT DESCRIPTION: PROPANE TANK EXTERIOR

TOTAL FLOOR AREA. N/A

TOTAL AREA. 110.87 m²

GRID SIZE. N/A

SURVEY UNIT 771024 - MAP 7 OF 7



| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| ① | SMEAR & TSC LOCATION |
| ② | SMEAR, TSC, & SAMPLE LOCATION |
| ■ | OPEN/INACCESSIBLE AREA |
| □ | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-774A (D108)

SURVEY UNIT. 771025

CLASSIFICATION. 3

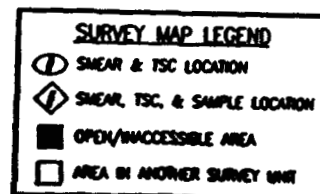
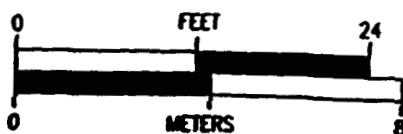
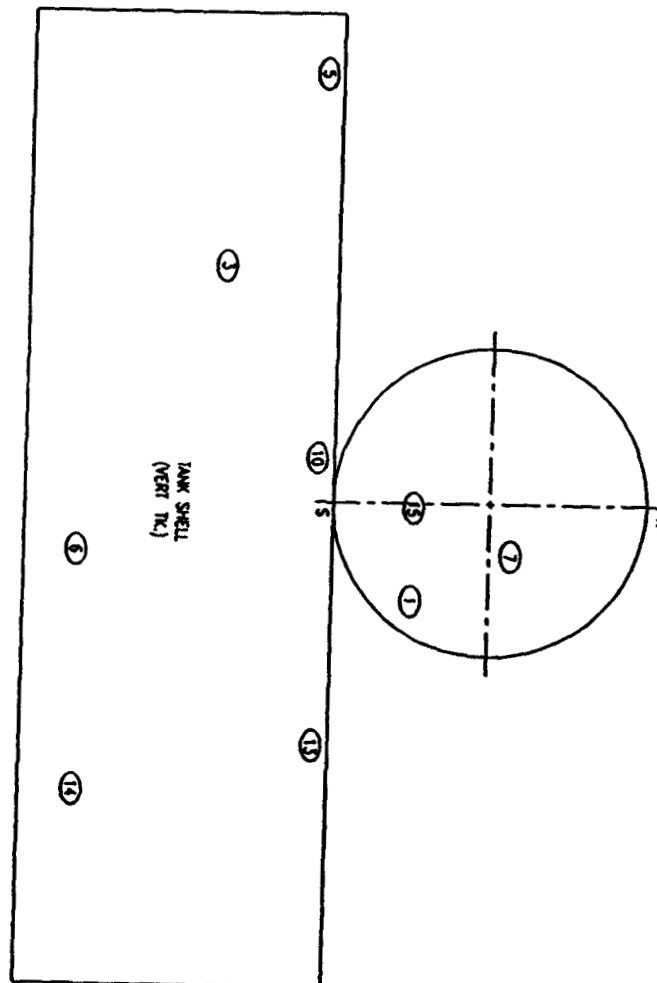
SURVEY UNIT DESCRIPTION. STEAM CONDENSATE HOLDING TANK EXTERIOR

TOTAL FLOOR AREA. N/A

TOTAL AREA. 161.47 M²

GRID SIZE. N/A

SURVEY UNIT 771025 - MAP 1 OF 8



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA

TANK T-173

SURVEY UNIT DESCRIPTION. PROPANE TANK EXTERIOR

SURVEY UNIT 771025

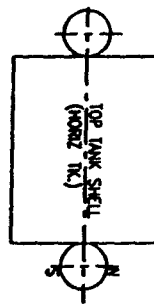
CLASSIFICATION. 3

TOTAL FLOOR AREA N/A

TOTAL AREA 14.37 M²

GRID SIZE N/A

SURVEY UNIT 771025 - MAP 2 OF 8



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SURVEY MAP LEGEND

- ① SHEAR & TSC LOCATION
- ② SHEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-174

SURVEY UNIT 771025

CLASSIFICATION 3

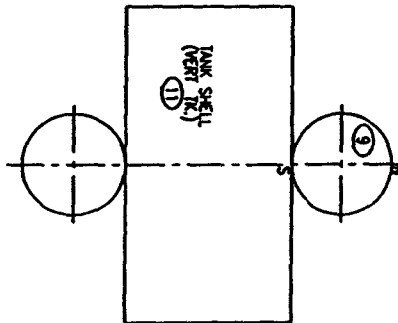
SURVEY UNIT DESCRIPTION: LIQUID ARGON TANK EXTERIOR

TOTAL FLOOR AREA N/A

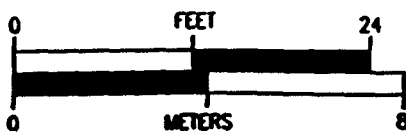
TOTAL AREA 29.59 M²

GRID SIZE N/A

SURVEY UNIT 771025 - MAP 3 OF 8



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| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| ① | SHEAR & TSC LOCATION |
| ② | SHEAR, TSC, & SAMPLE LOCATION |
| ■ | OPEN/INACCESSIBLE AREA |
| □ | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-176

SURVEY UNIT 771025

CLASSIFICATION: 3

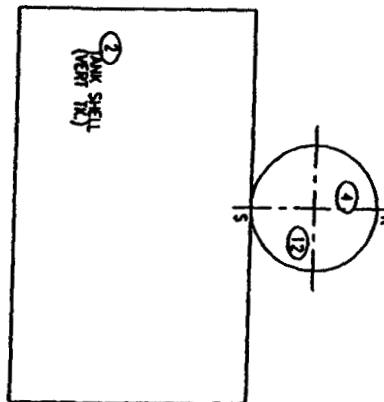
SURVEY UNIT DESCRIPTION: SODIUM HYDROXIDE TANK EXTERIOR

TOTAL FLOOR AREA N/A

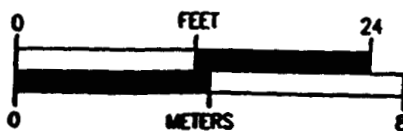
TOTAL AREA 44 99 M²

GRID SIZE N/A

SURVEY UNIT 771025 - MAP 4 OF 8



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| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| ① | SMEAR & TSC LOCATION |
| ② | SMEAR, TSC, & SAMPLE LOCATION |
| ■ | OPEN/INACCESSIBLE AREA |
| □ | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-179

SURVEY UNIT. 771025

CLASSIFICATION: 3

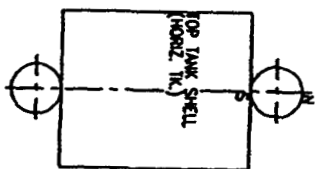
SURVEY UNIT DESCRIPTION PROPANE TANK EXTERIOR

TOTAL FLOOR AREA N/A

TOTAL AREA 31.94 M²

GRID SIZE. N/A

SURVEY UNIT 771025 - MAP 5 OF 8



| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| | SHEAR & TSC LOCATION |
| | SHEAR, TSC, & SAMPLE LOCATION |
| | OPEN/INACCESSIBLE AREA |
| | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-180

SURVEY UNIT: 771025

CLASSIFICATION: 3

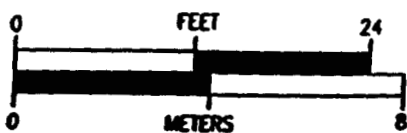
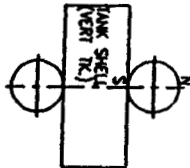
SURVEY UNIT DESCRIPTION: COOLING WATER STORAGE TANK EXTERIOR

TOTAL FLOOR AREA N/A

TOTAL AREA 6.22 M²

GRID SIZE N/A

SURVEY UNIT 771025 - MAP 6 OF 8



SURVEY MAP LEGEND

- ① SMEAR & TSC LOCATION
- ⬠ SMEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA
TANK T-184 (#68)

SURVEY UNIT DESCRIPTION: WASTE TANK COVER

TOTAL FLOOR AREA: N/A

SURVEY UNIT 771025

TOTAL AREA .30 M²

CLASSIFICATION: 3

GRID SIZE N/A

SURVEY UNIT 771025 - MAP 7 OF 8

NOTE
TANK IS LOCATED UNDER CONCRETE SLAB.



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| SURVEY MAP LEGEND | |
|-------------------|-------------------------------|
| ① | SHEAR & TSC LOCATION |
| ◇ | SHEAR, TSC, & SAMPLE LOCATION |
| ■ | OPEN/INACCESSIBLE AREA |
| □ | AREA IN ANOTHER SURVEY UNIT |

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

SURVEY AREA

TANK T-185

SURVEY UNIT DESCRIPTION: CAUSTIC-POTASSIUM HYDROXIDE TANK EXTERIOR

TOTAL FLOOR AREA N/A

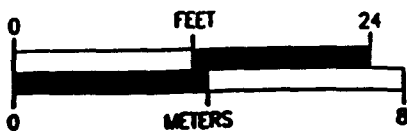
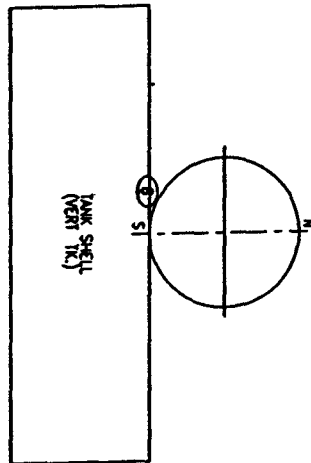
SURVEY UNIT 771025

TOTAL AREA 34.97 M²

CLASSIFICATION: 3

GRID SIZE: N/A

SURVEY UNIT 771025 - MAP 8 OF 8



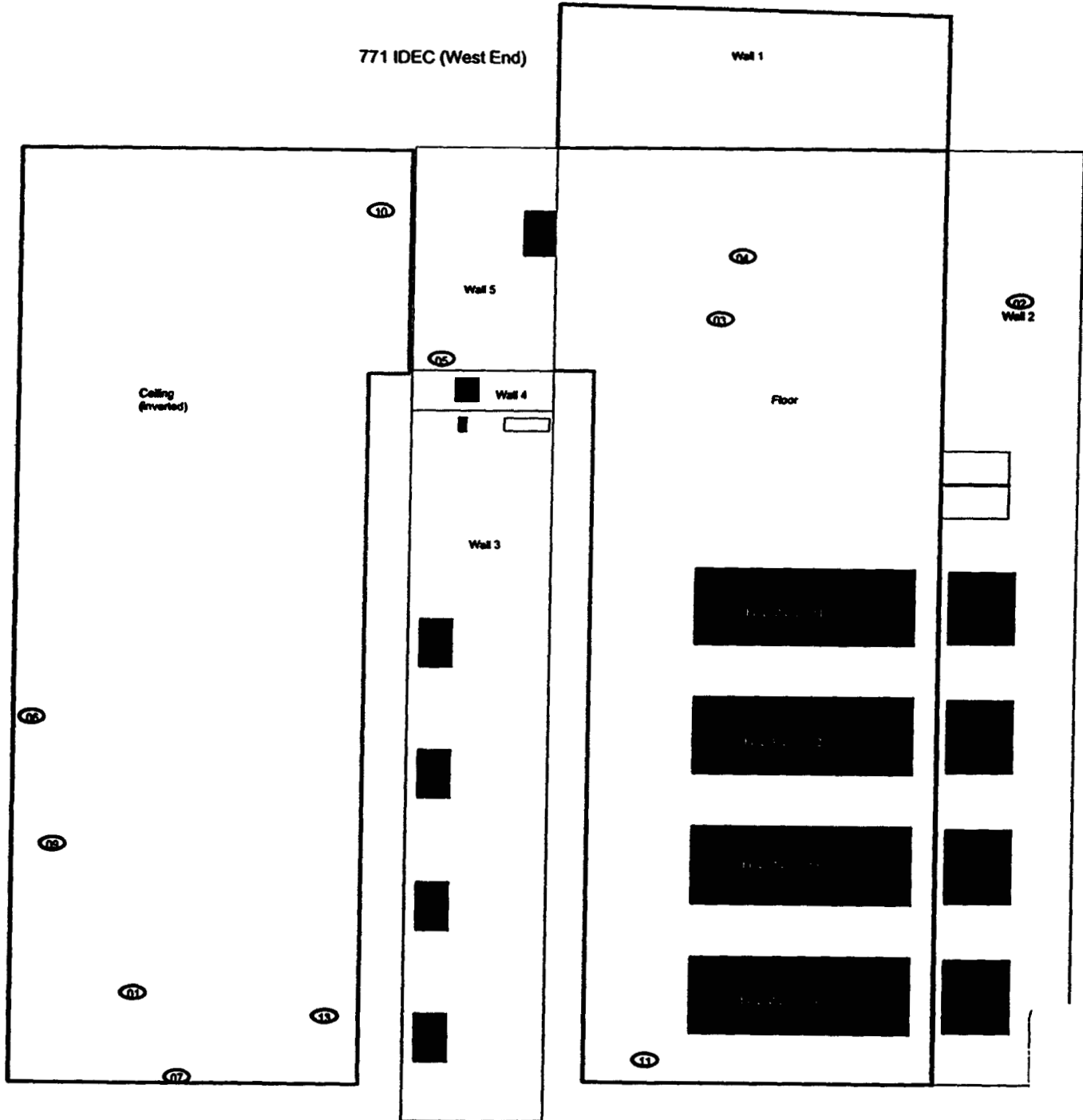
SURVEY MAP LEGEND

- ① SMEAR & TSC LOCATION
- ② SMEAR, TSC, & SAMPLE LOCATION
- OPEN/INACCESSIBLE AREA
- AREA IN ANOTHER SURVEY UNIT

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AI Survey Unit: 771026 Classification: 3
 Building: 771
 Survey Unit Description: IDEC (West end) Interior
 Total Floor Area: 616 sq. m Total Area: 2256 sq. m Grid Size: N/A

SURVEY UNIT 771026 - MAP 1 OF 2



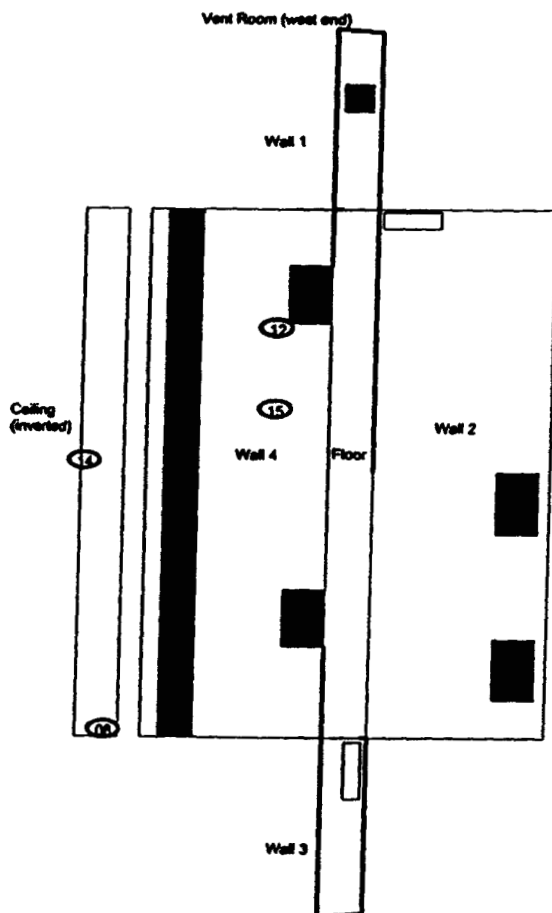
254



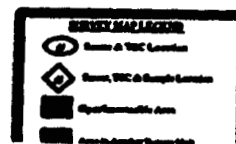
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AI Survey Unit: 771026 Classification: 3
 Building: 771
 Survey Unit Description: IDEC (West end) Interior
 Total Floor Area: 616 sq. m Total Area: 2256 sq. m Grid Size: N/A

SURVEY UNIT 771026 - MAP 2 OF 2



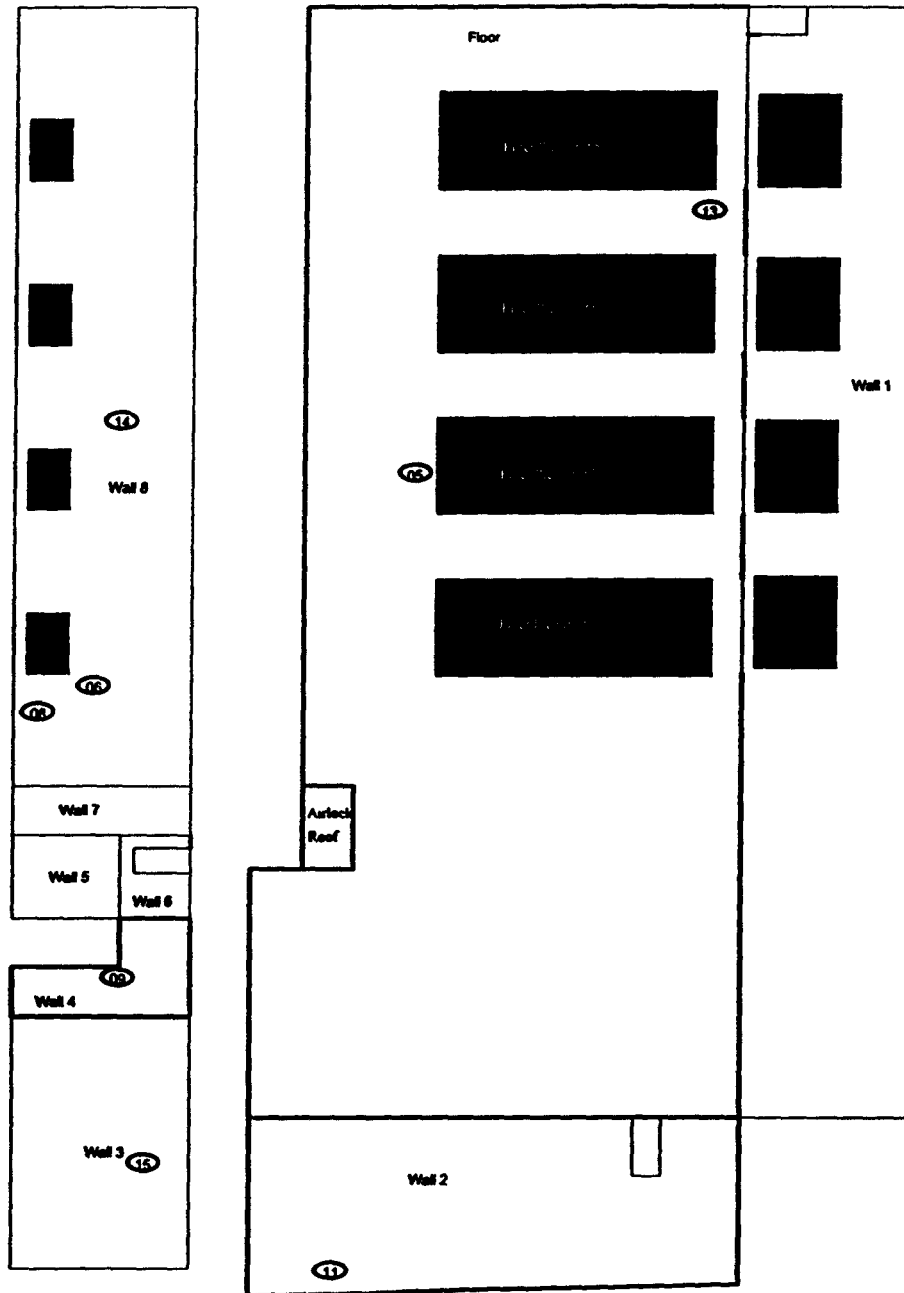
255



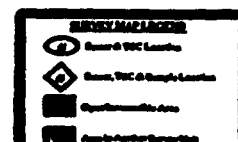
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AI Survey Unit: 771027 Classification: 3
 Building: 771
 Survey Unit Description: IDEC (East end) Interior
 Total Floor Area: 584 sq. m Total Area: 2058 sq. m Grid Size: N/A

SURVEY UNIT 771027 - MAP 1 OF 2



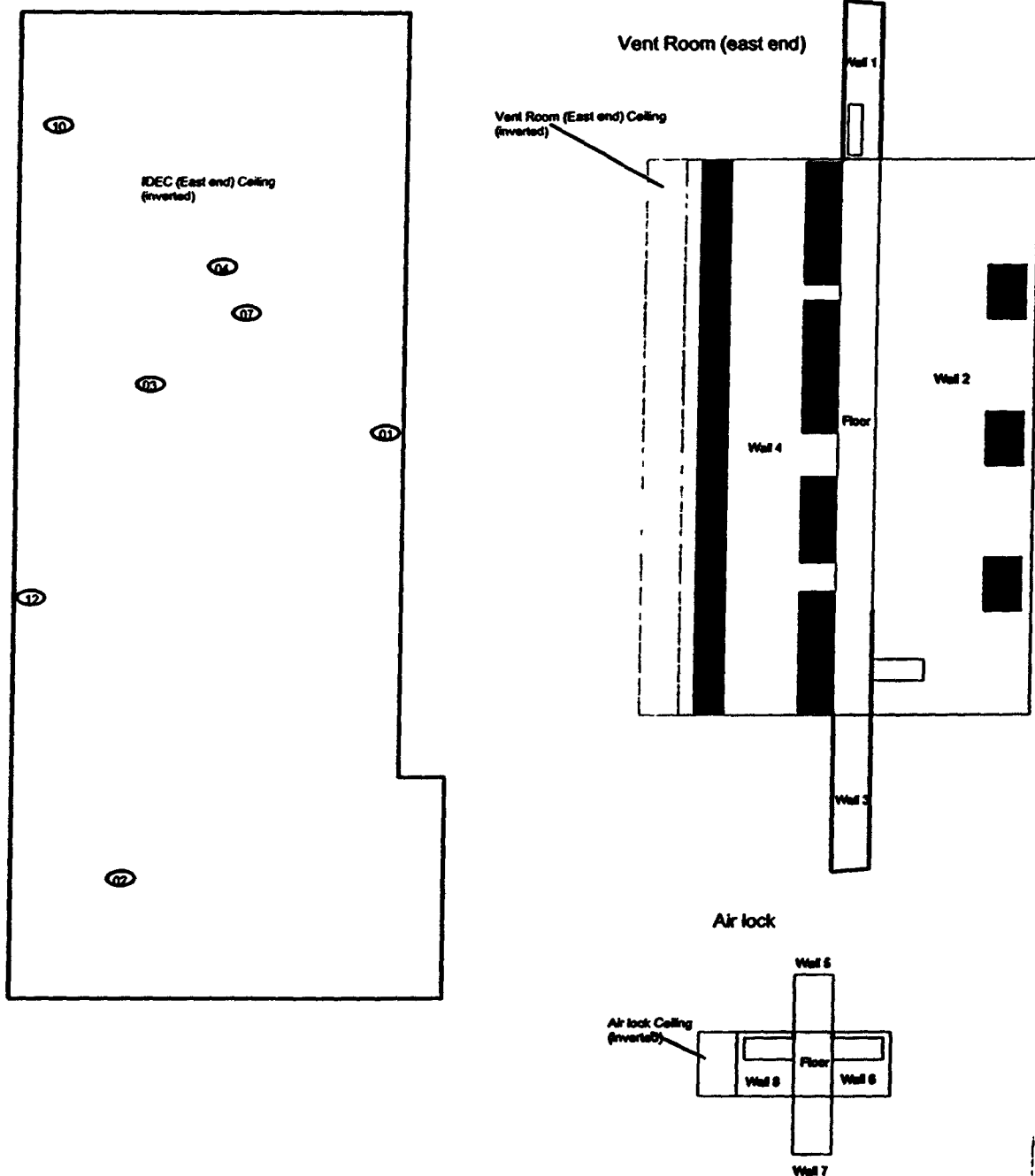
256



RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

Survey Area: AI Survey Unit: 771027 Classification: 3
 Building: 771
 Survey Unit Description: IDEC (East end) Interior
 Total Floor Area: 584 sq. m Total Area: 2058 sq. m Grid Size: N/A

SURVEY UNIT 771027 - MAP 2 OF 2

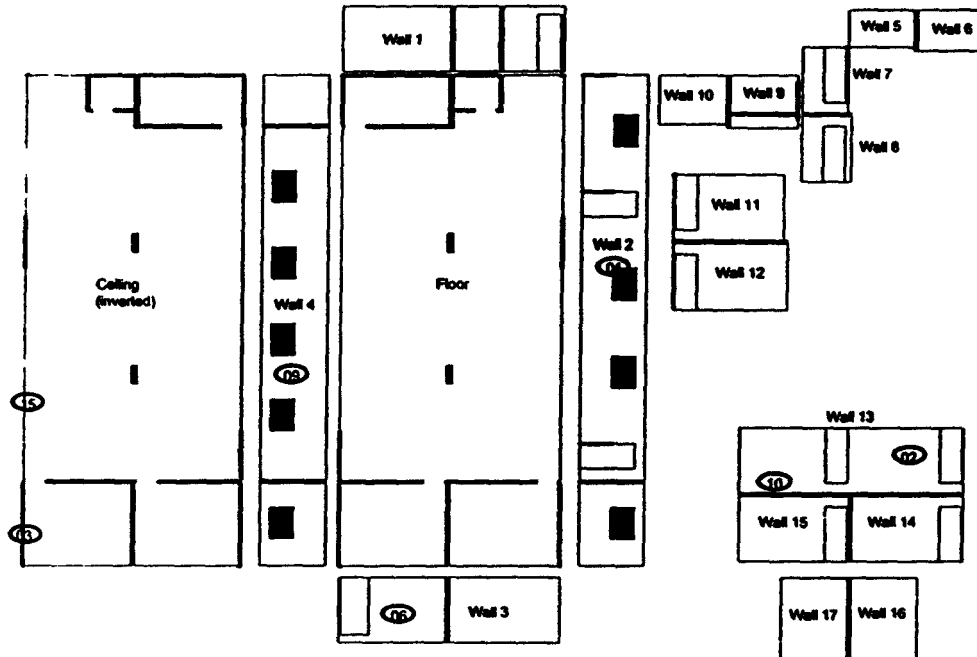


RADIOLOGICAL CLOSEOUT SURVEY FOR THE 771 CLUSTER

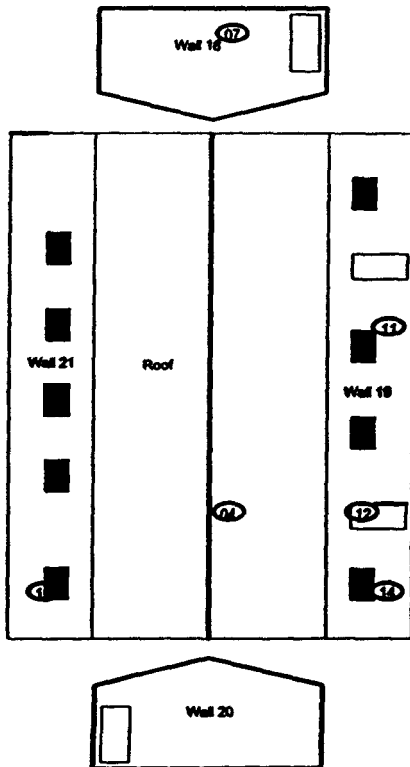
Survey Area: AJ Survey Unit: 771030 Classification: 3
 Building: T771R, T771-DT
 Survey Unit Description: Exterior/Interior
 Total Floor Area: 159 sq. m Total Area: 957 sq. m Grid Size: N/A

SURVEY UNIT 771030 - MAP 1 OF 1

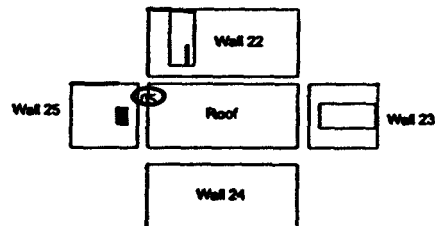
T771R Interior



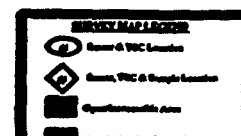
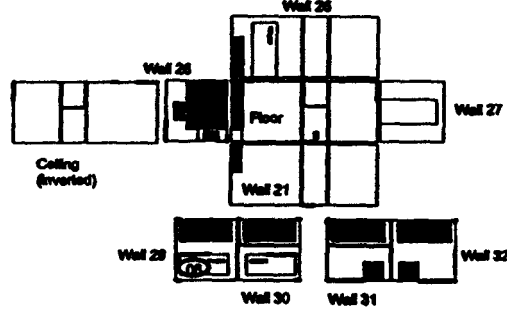
T771R Exterior



T771DT Exterior



T771DT Interior



ATTACHMENT AB

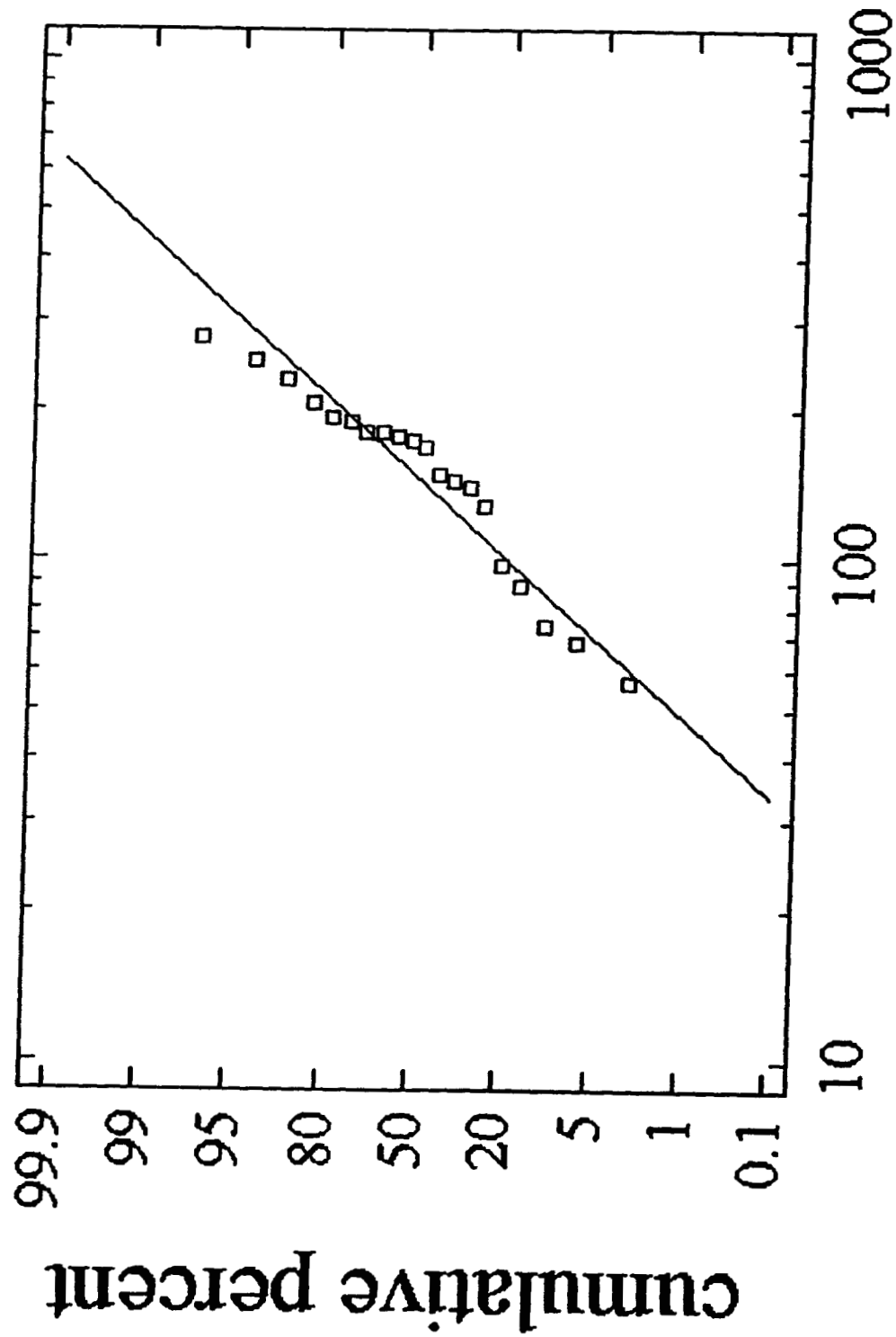
Po-210 Investigation Data

Survey Unit 771010 Po-210 Investigation

| | |
|--------------------------|----------------|
| Instrument #: | 2379 |
| Cal. Due Date: | 1/26/00 |
| Efficiency (c/d): | 0.2237 |

| Gross Result (cpm) | Efficiency (c/d) | Net Result (dpm/100 cm²) |
|-------------------------------|-----------------------------|--|
| 42 7 | 0.2237 | 191 |
| 39 3 | 0.2237 | 176 |
| 40 0 | 0.2237 | 179 |
| 56 0 | 0.2237 | 250 |
| 62 0 | 0.2237 | 277 |
| 37.3 | 0.2237 | 167 |
| 46 0 | 0.2237 | 206 |
| 40 0 | 0.2237 | 179 |
| 42 0 | 0.2237 | 188 |
| 31 3 | 0.2237 | 140 |
| 51 3 | 0.2244 | 229 |
| 38 7 | 0.2244 | 172 |
| 33 3 | 0.2244 | 148 |
| 28 7 | 0.2244 | 128 |
| 32 0 | 0.2244 | 143 |
| 12 7 | 0.2244 | 57 |
| 16 7 | 0.2244 | 74 |
| 22 0 | 0.2244 | 98 |
| 20 0 | 0.2244 | 89 |
| 15 3 | 0.2244 | 68 |

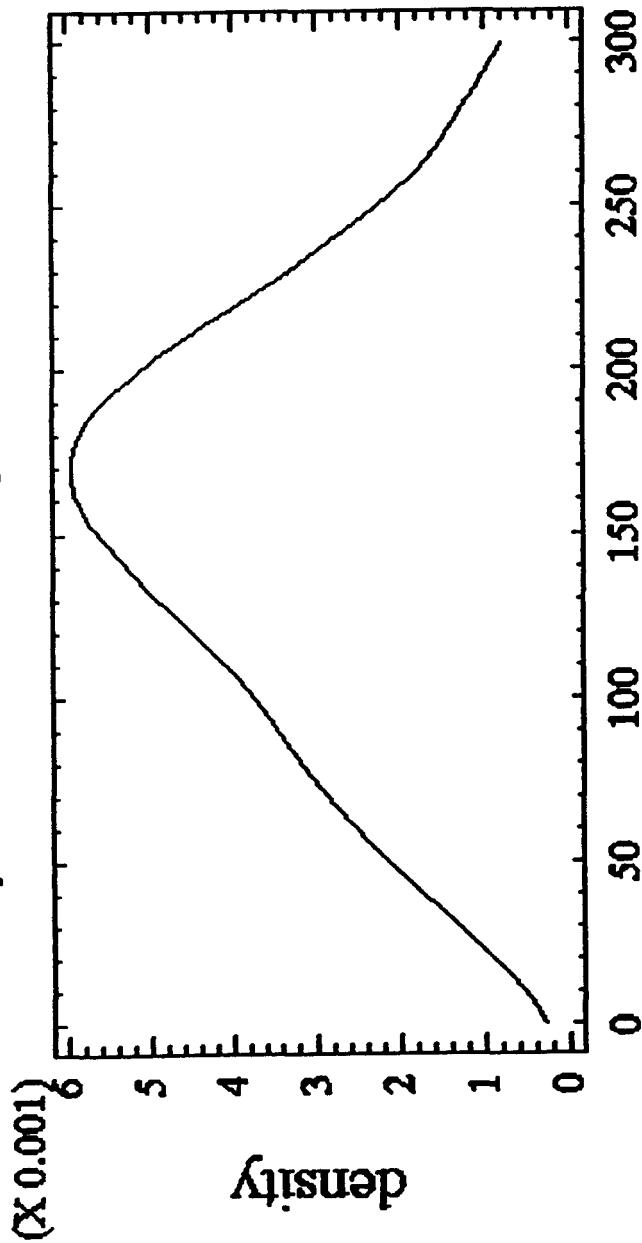
Lognormal Probability Plot



Survey Unit 779010 dpm

Since the smallest P-value amongst the tests performed is greater than or equal to 0.10, we can not reject the idea that Survey Unit 779010 dpm comes from a lognormal distribution with 90% or higher confidence.

Density Trace for Survey Unit 779010 dpm



Survey Unit 779010 dpm

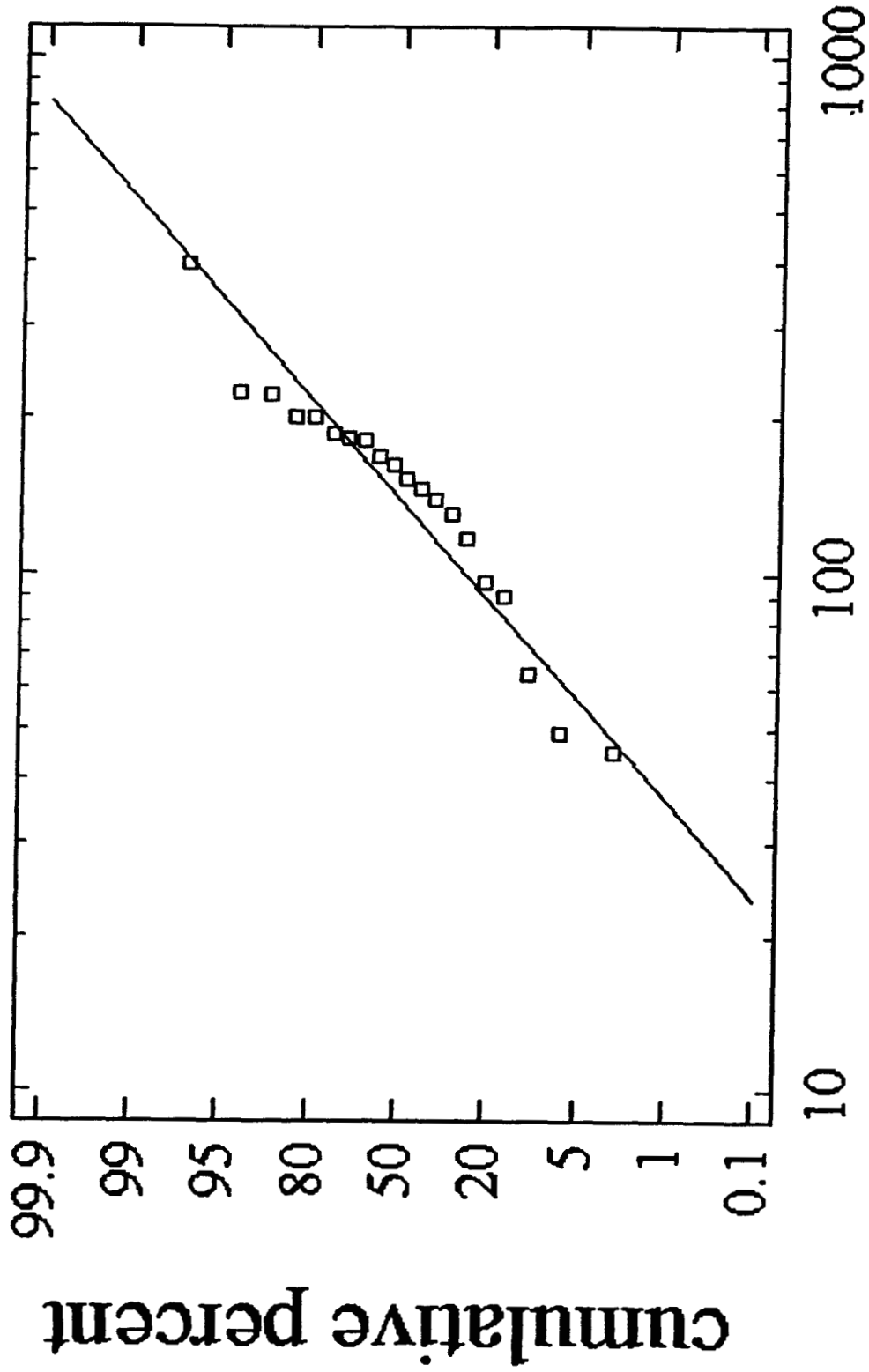
Survey Unit 771011 Po-210 Investigation

| | | |
|--------------------------|----------------|----------------|
| Instrument #: | 2358 | 1259 |
| Cal. Due Date: | 9/29/00 | 10/4/00 |
| Efficiency (c/d): | 0.2289 | 0.2066 |

| Gross Result (cpm) | Efficiency (c/d) | (dpm/100 cm²) |
|-------------------------------|-----------------------------|-------------------------------------|
| 33 3 | 0.2289 | 145 |
| 46 0 | 0.2289 | 201 |
| 26 7 | 0.2289 | 117 |
| 51 3 | 0.2289 | 224 |
| 42 0 | 0.2289 | 183 |
| 20 7 | 0.2289 | 90 |
| 22 0 | 0.2289 | 96 |
| 11 3 | 0.2289 | 49 |
| 14 7 | 0.2289 | 64 |
| 10 3 | 0.2289 | 45 |
| 81 3 | 0.2066 | 394 |
| 37 3 | 0.2066 | 181 |
| 46 0 | 0.2066 | 223 |
| 34 7 | 0.2066 | 168 |
| 41 3 | 0.2066 | 200 |
| 28 7 | 0.2066 | 139 |
| 38 7 | 0.2066 | 187 |
| 31 3 | 0.2066 | 152 |
| 27 0 | 0.2066 | 131 |
| 33 7 | 0.2066 | 163 |

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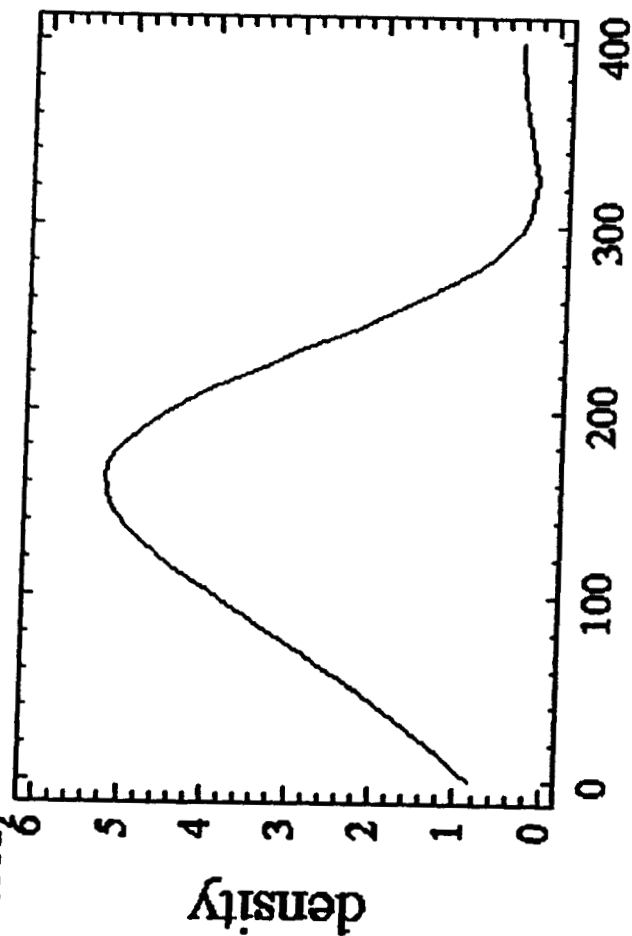
Lognormal Probability Plot



Survey Unit 779011 dpm

Since the smallest P-value amongst the tests performed is greater than or equal to 0.10, we can not reject the idea that Survey Unit 779011 dpm comes from a lognormal distribution with 90% or higher confidence.

Density Trace for Survey Unit 779011 dpm
($\times 0.001$)



Sample ID: Survey Unit 771011 T771B roof **Type:** Unknown
Batch ID: unknowns
Acquisition Start: October 11, 2000 07:46:46
Analysis Date: October 11, 2000 09:47:19
Procedure: Po210 count
Device: Oasis:01:01
Analysis Method: ROI Analysis
Spectrum File: 00001703.OXS **LiveTime:** 7,200.00

Calibrations:

Energy = $5.420\text{E}+01 + 2.768\text{E}+00 \cdot \text{Chn}$ **Coeff. of Correlation:** -0.998
Calibration Date: August 16, 2000 08:13:56 **Std:** TS4189b
 Shape not Calibrated.
Efficiency = $3.312\text{E}-01 \pm 4.399\text{E}-03$
Calibration Date: August 16, 2000 13:23:16 **Std:** TS4189b

External Recovery No Ext.Recovery

Original Sample Amount:

1.000 \pm 0.000 samp

Aliquot Amount:

1.000 \pm 0.000 samp

ROI DATA

| ROI ID # | ASSOCIATED NUCLIDE | EXTENTS | | PK EN (keV) | FWHM (keV) |
|-------------|-----------------------|---------|--------|----------------|---------------|
| | | START | END | | |
| 1 ROI # 2 | Po218 | 5556.4 | 6103.7 | 5828.9 | 2.8 |
| 2 ROI # 3 | Po214 | 6589.7 | 7877.5 | 7232.4 | 2.8 |
| 3 ROI # 4 | Po212 | 8394.4 | 8749.3 | 8572.3 | 2.8 |
| 4 ROI # 4 | Po210 | 2521.2 | 5388.4 | 5236.5 | 7.2 |

ROI ANALYSIS RESULTS

| ROI ID | NET COUNTS | BKG/INTERF | CPM | ROI TYPE |
|---------|------------------|------------|----------------------|----------|
| ROI # 2 | 1.0 \pm 1.5 | 1.00 | 8.33E-03 \pm 0.012 | Unknown |
| ROI # 3 | 2.3 \pm 1.8 | 0.67 | 0.019 \pm 0.015 | Unknown |
| ROI # 4 | 1.5 \pm 1.4 | 0.50 | 0.013 \pm 0.012 | Unknown |
| ROI # 4 | 581.5 \pm 24.2 | 2.50 | 4.846 \pm 0.201 | Unknown |

NUCLIDE ANALYSIS RESULTS

| ROI ID | ASSOC NUC | EMM. PROB | ACTIVITY (dpm/samp) | MDA (dpm) |
|---------|-----------|-----------|------------------------|--------------|
| ROI # 2 | Po218 | 1.000 | 0.025 \pm 0.037 | 1.58E-01 |
| ROI # 3 | Po214 | 1.000 | 0.059 \pm 0.044 | 1.41E-01 |
| ROI # 4 | Po212 | 1.000 | 0.038 \pm 0.036 | 1.31E-01 |
| ROI # 4 | Po210 | 1.000 | 14.633 \pm 0.639 | 2.09E-01 |

Activity reported as of October 11, 2000 07:46:46

ANALYSIS REVIEWED BY: Greg A. Hall

APPROVED BY: C. J. Brunner 10.12.00

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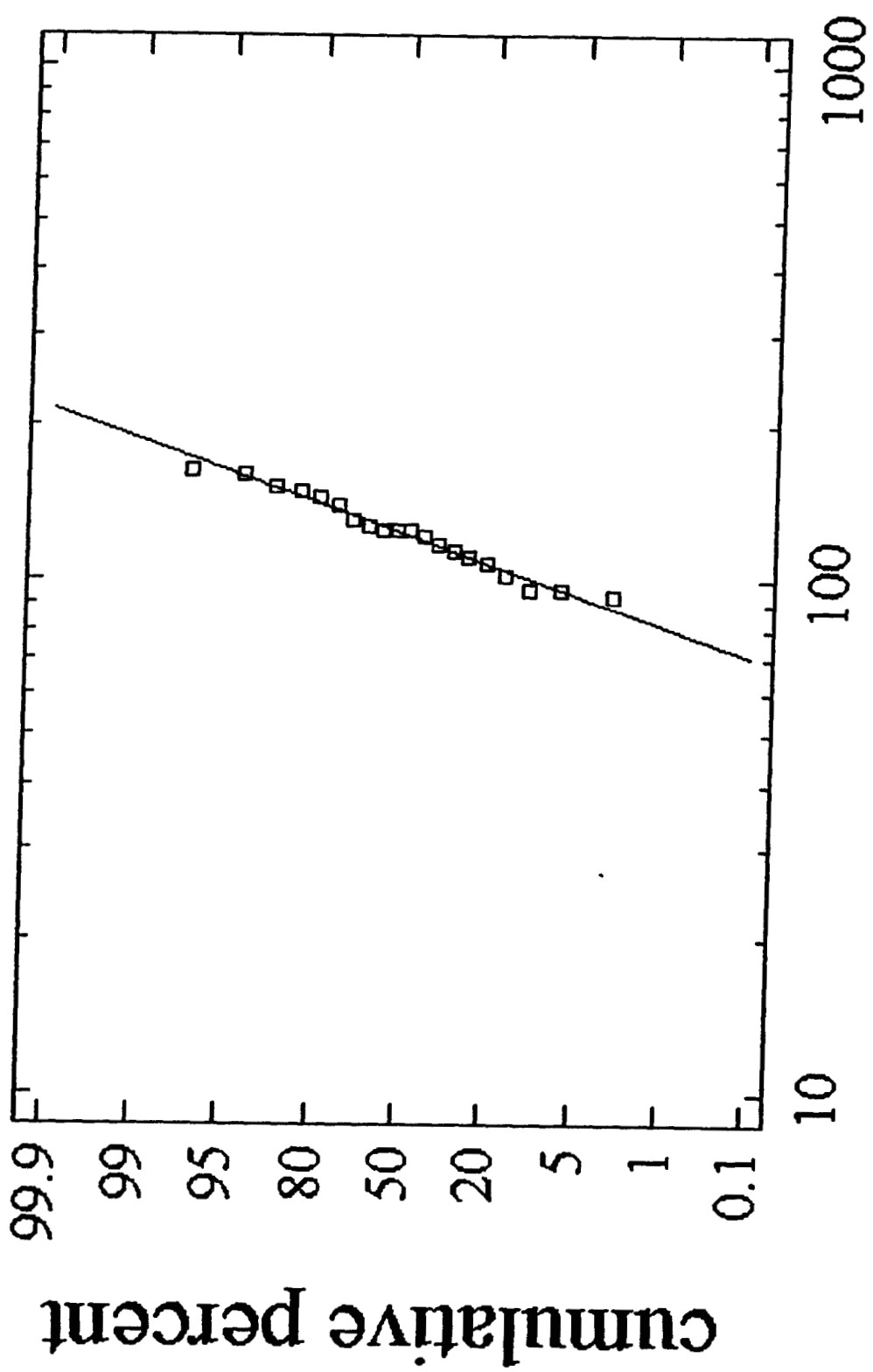
Survey Unit 771012 Po-210 Investigation

| | |
|-------------------|---------|
| Instrument #: | 2358 |
| Cal. Due Date: | 9/29/00 |
| Efficiency (c/d): | 0.2289 |

| Gross Result (cpm) | Efficiency (c/d) | Net Result (dpm/100 cm ²) |
|-----------------------|---------------------|--|
| 37 3 | 0.2289 | 163 |
| 33 3 | 0.2289 | 145 |
| 36 7 | 0.2289 | 160 |
| 32 0 | 0.2289 | 140 |
| 26 0 | 0.2289 | 114 |
| 34 7 | 0.2289 | 152 |
| 30 0 | 0.2289 | 131 |
| 28 7 | 0.2289 | 125 |
| 21 3 | 0.2289 | 93 |
| 24 7 | 0.2289 | 108 |
| 22 0 | 0.2289 | 96 |
| 29 3 | 0.2289 | 128 |
| 22.0 | 0.2289 | 96 |
| 34 0 | 0.2289 | 149 |
| 25 3 | 0.2289 | 111 |
| 26 7 | 0.2289 | 117 |
| 28 7 | 0.2289 | 125 |
| 23 3 | 0.2289 | 102 |
| 28 7 | 0.2289 | 125 |
| 28 0 | 0.2289 | 122 |

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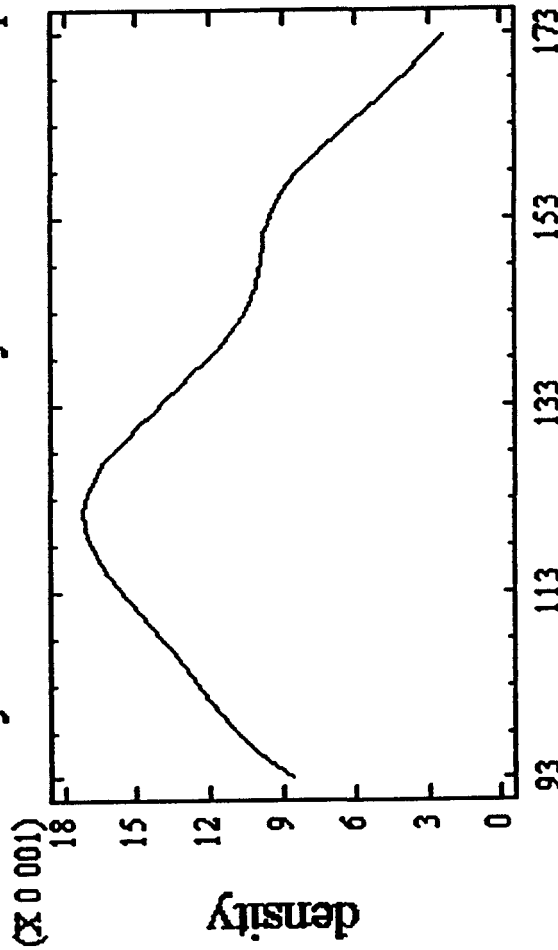
Lognormal Probability Plot



Survey Unit 779012 dpm

Since the smallest P-value amongst the tests performed is greater than or equal to 0.10, we can not reject the idea that Survey Unit 779012 dpm comes from a lognormal distribution with 90% or higher confidence.

Density Trace for Survey Unit 779012 dpm



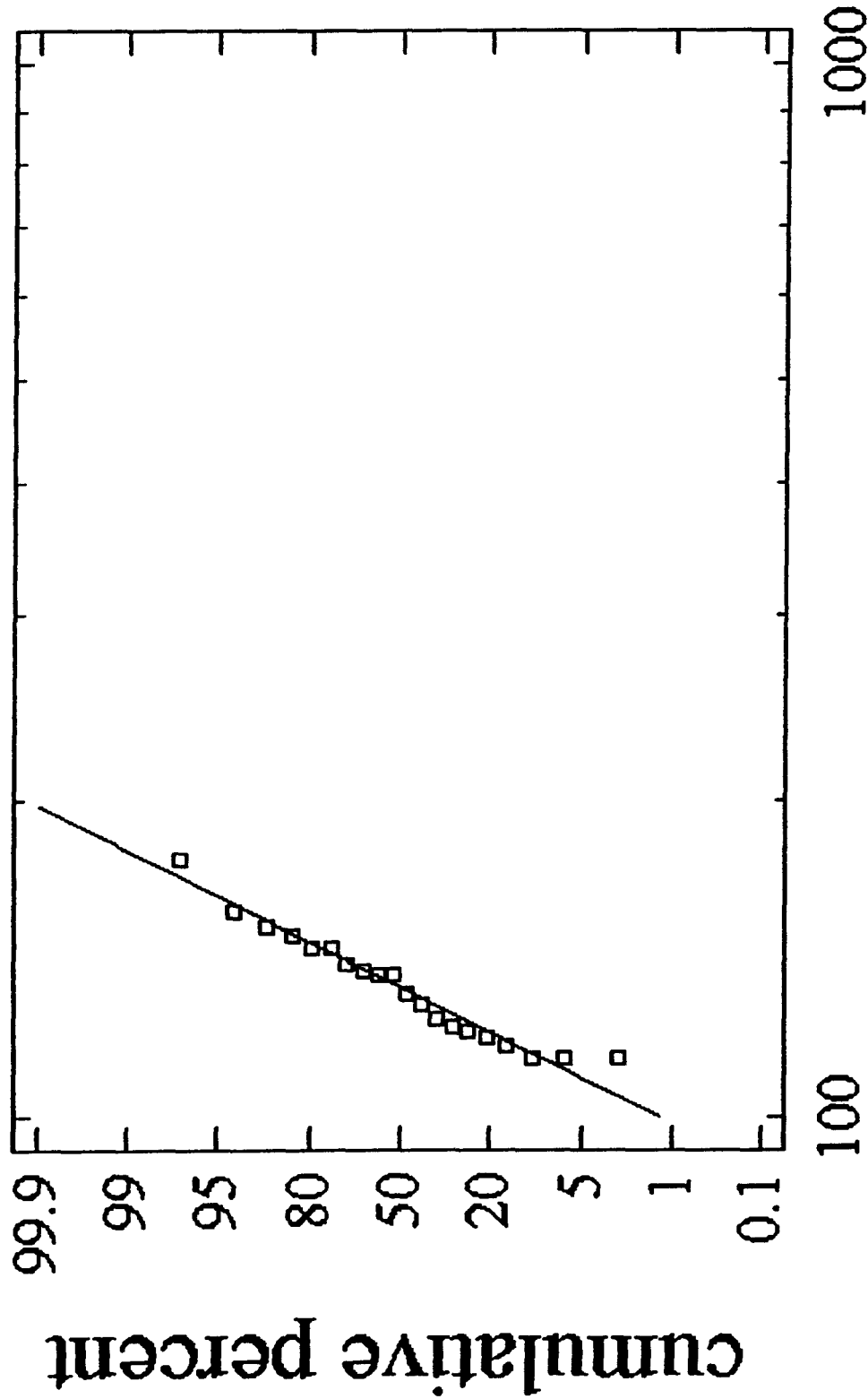
Survey Unit 771013 Po-210 Investigation

| | |
|-------------------|---------|
| Instrument #: | 2358 |
| Cal. Due Date: | 9/29/00 |
| Efficiency (c/d). | 0.2289 |

| Gross Result (cpm) | Efficiency (c/d) | Net Result (dpm/100 cm ²) |
|-----------------------|---------------------|--|
| 32 0 | 0.2289 | 140 |
| 29 3 | 0.2289 | 128 |
| 28 0 | 0.2289 | 122 |
| 33.3 | 0.2289 | 145 |
| 31 3 | 0.2289 | 137 |
| 26 0 | 0.2289 | 114 |
| 26 0 | 0.2289 | 114 |
| 33 3 | 0.2289 | 145 |
| 30 0 | 0.2289 | 131 |
| 26 7 | 0.2289 | 117 |
| 36 0 | 0.2289 | 157 |
| 28 3 | 0.2289 | 124 |
| 31 7 | 0.2289 | 138 |
| 34 0 | 0.2289 | 149 |
| 40 3 | 0.2289 | 176 |
| 27 3 | 0.2289 | 119 |
| 26.0 | 0.2289 | 114 |
| 34 7 | 0.2289 | 152 |
| 27 7 | 0.2289 | 121 |
| 31 3 | 0.2289 | 137 |

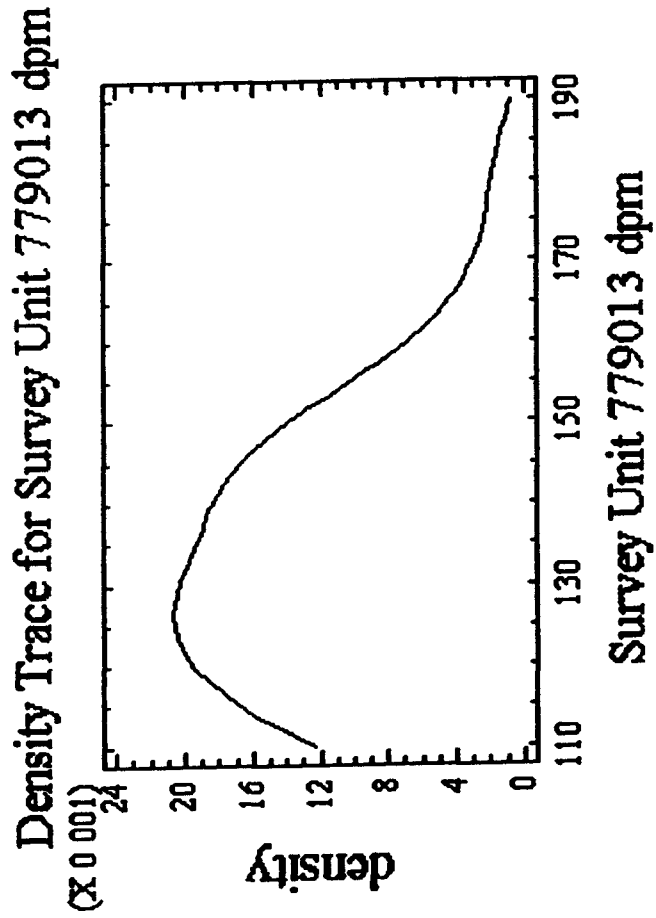
112

Lognormal Probability Plot



Survey Unit 779013 dpm

Since the smallest P-value amongst the tests performed is greater than or equal to 0.10, we can not reject the idea that Survey Unit 779013 dpm comes from a lognormal distribution with 90% or higher confidence.



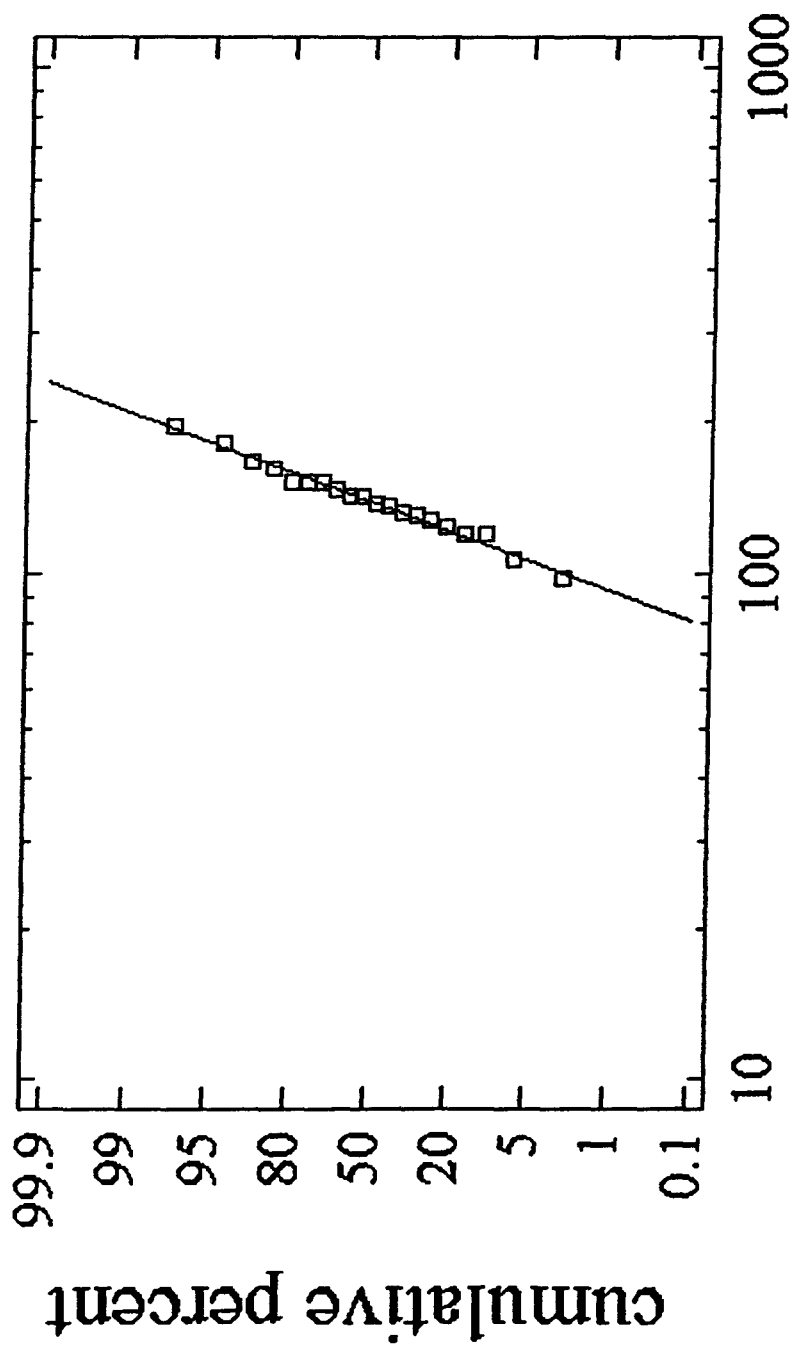
Survey Unit 771014 Po-210 Investigation

| | |
|-------------------|---------|
| Instrument #: | 2375 |
| Cal. Due Date: | 1/10/01 |
| Efficiency (c/d): | 0.2244 |

| Gross Result (cpm) | Efficiency (c/d) | Net Result (dpm/100 cm ²) |
|-----------------------|---------------------|--|
| 30 7 | 0.2244 | 137 |
| 28 0 | 0.2244 | 125 |
| 34 0 | 0.2244 | 152 |
| 32 0 | 0.2244 | 143 |
| 22 0 | 0.2244 | 98 |
| 34 0 | 0.2244 | 152 |
| 29 3 | 0.2244 | 131 |
| 28 7 | 0.2244 | 128 |
| 32 1 | 0.2244 | 143 |
| 44 3 | 0.2244 | 197 |
| 24 0 | 0.2244 | 107 |
| 31 3 | 0.2244 | 139 |
| 27 1 | 0.2244 | 121 |
| 33 0 | 0.2244 | 147 |
| 34 3 | 0.2244 | 153 |
| 29 7 | 0.2244 | 132 |
| 27 1 | 0.2244 | 121 |
| 36 3 | 0.2244 | 162 |
| 37 7 | 0.2244 | 168 |
| 41 0 | 0.2244 | 183 |

274

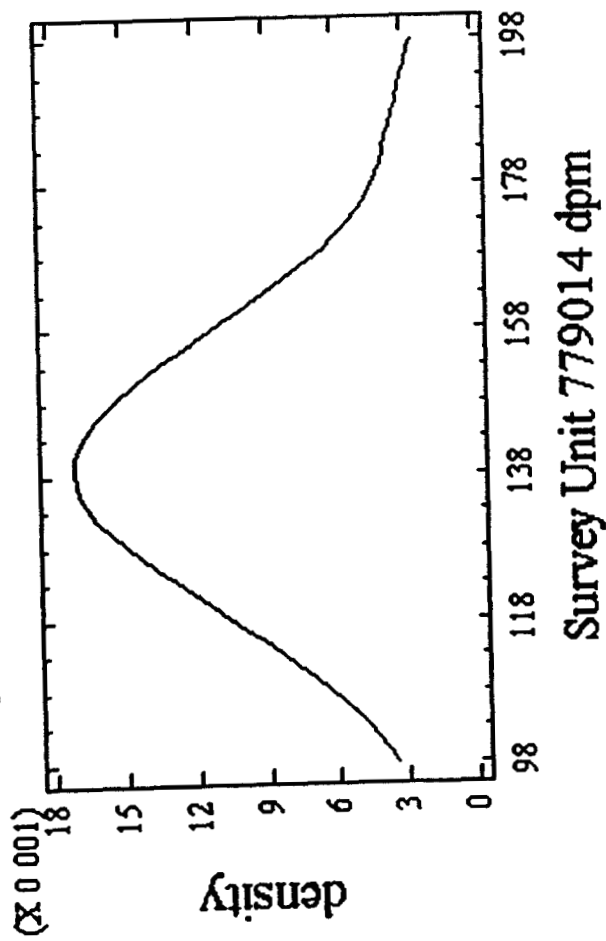
Lognormal Probability Plot



Survey Unit 779014 dpm

Since the smallest P-value amongst the tests performed is greater than or equal to 0.10, we can not reject the idea that Survey Unit 779014 dpm comes from a lognormal distribution with 90% or higher confidence.

Density Trace for Survey Unit 779014 dpm



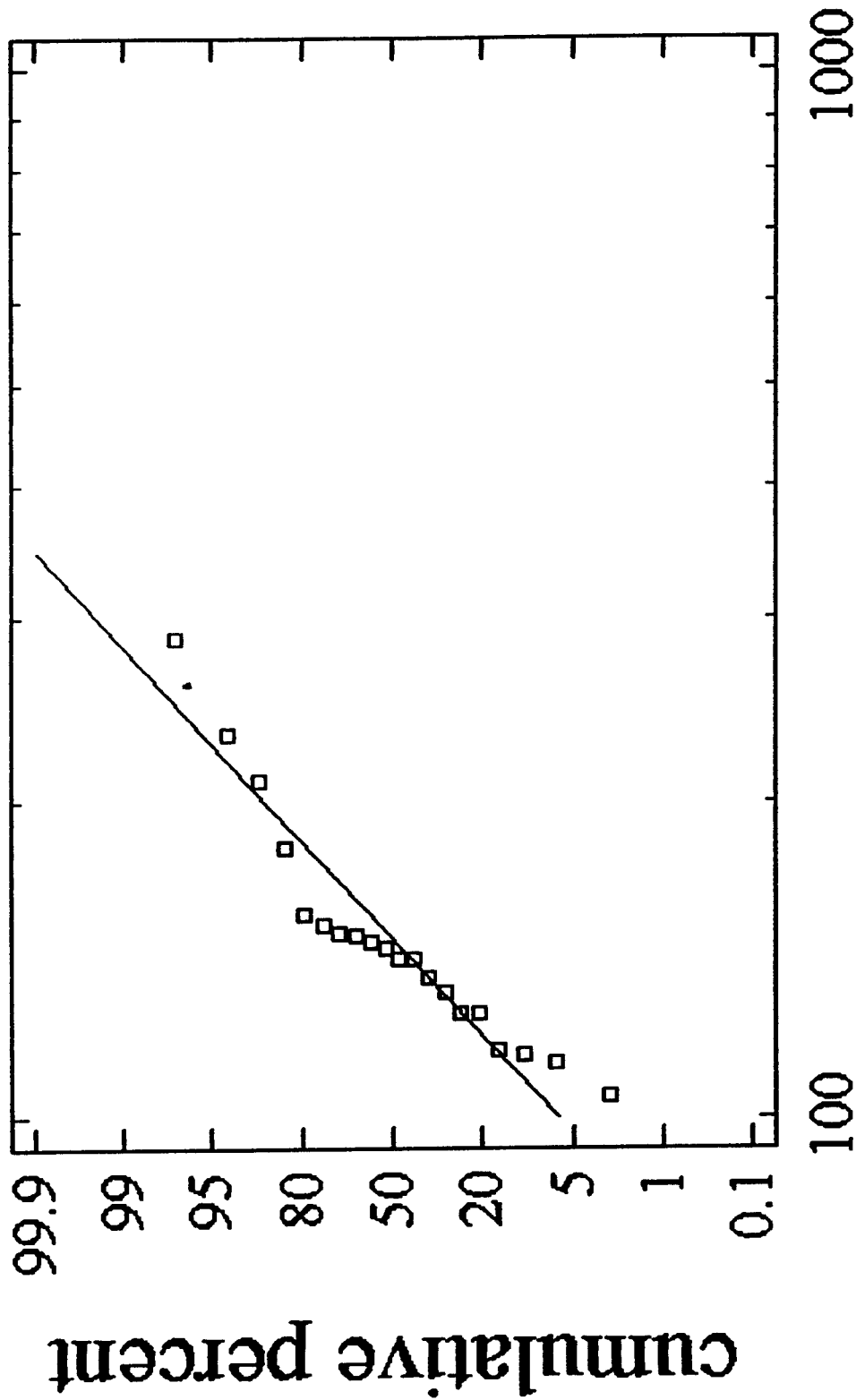
Survey Unit 771016 Po-210 Investigation

| | |
|-------------------|---------|
| Instrument #: | 1259 |
| Cal Due Date: | 10/4/00 |
| Efficiency (c/d): | 0.2066 |

| Gross Result (cpm) | Efficiency (c/d) | Net Result (dpm/100 cm ²) |
|-----------------------|---------------------|---|
| 28 0 | 0.2066 | 136 |
| 43 3 | 0.2066 | 210 |
| 23 3 | 0.2066 | 113 |
| 30 0 | 0.2066 | 145 |
| 30 7 | 0.2066 | 149 |
| 59 3 | 0.2066 | 287 |
| 24 0 | 0.2066 | 116 |
| 30 3 | 0.2066 | 147 |
| 29 3 | 0.2066 | 142 |
| 26 0 | 0.2066 | 126 |
| 21 7 | 0.2066 | 105 |
| 27 3 | 0.2066 | 132 |
| 31 0 | 0.2066 | 150 |
| 48 0 | 0.2066 | 232 |
| 32 3 | 0.2066 | 156 |
| 26 0 | 0.2066 | 126 |
| 29 3 | 0.2066 | 142 |
| 23 7 | 0.2066 | 115 |
| 31 7 | 0.2066 | 153 |
| 37 3 | 0.2066 | 181 |

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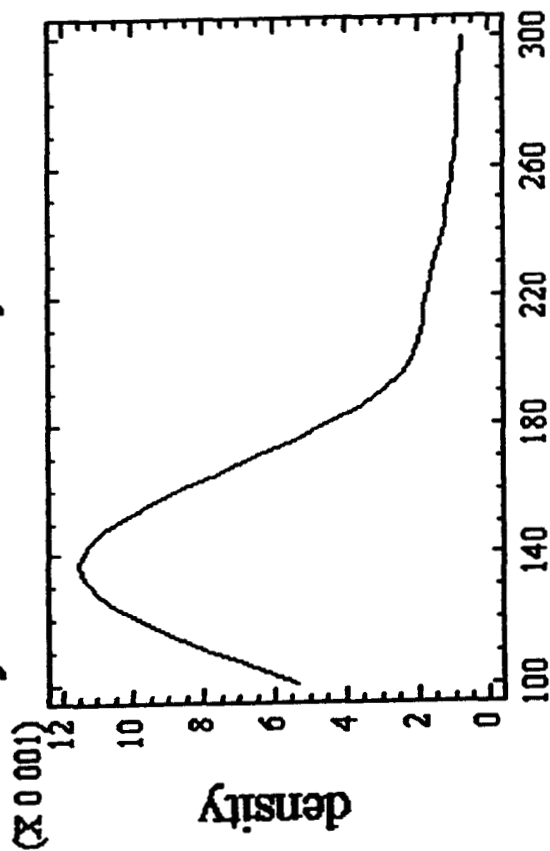
Lognormal Probability Plot



Survey Unit 779016 dpm

Since the smallest P-value amongst the tests performed is less than 0.10, we can reject the idea that Survey Unit 779016 dpm comes from a lognormal distribution with 90% confidence.

Density Trace for Survey Unit 779016 dpm



Survey Unit 779016 dpm

Sample ID: Survey Unit 771016 bld714 roof **Type:** Unknown
Batch ID: unknowns
Acquisition Start: October 11, 2000 14:07:22
Analysis Date: October 11, 2000 16:10:46
Procedure: Po210 count
Device: Oasis:01:01
Analysis Method: ROI Analysis
Spectrum File: 00001713.OXS **LiveTime:** 7,300.00

Calibrations:
 Energy = $5.420\text{E}+01 + 2.768\text{E}+00 \cdot \text{Chn}$ **Coeff. of Correlation:** -0.998
Calibration Date: August 16, 2000 08:13:56 **Std:** TS4189b
 Shape not Calibrated.
Efficiency = $3.312\text{E}-01 \pm 4.399\text{E}-03$
Calibration Date: August 16, 2000 13:23:16 **Std:** TS4189b

External Recovery No Ext.Recovery

Original Sample Amount: 1.000 \pm 0.000 samp
Aliquot Amount: 1.000 \pm 0.000 samp

ROI DATA

| ROI ID # | ASSOCIATED NUCLIDE | EXTENTS START | EXTENTS END | PK EN (keV) | FWHM (keV) |
|-----------|--------------------|---------------|-------------|-------------|------------|
| 1 ROI # 2 | Po218 | 5556.4 | 6131.3 | 5842.7 | 2.8 |
| 2 ROI # 3 | Po214 | 6589.7 | 7877.5 | 7232.4 | 2.8 |
| 3 ROI # 4 | Po212 | 8394.4 | 8749.3 | 8572.3 | 1.4 |
| 4 ROI # 4 | Po210 | 2521.2 | 5360.8 | 4500.1 | 3.2 |

ROI ANALYSIS RESULTS

| ROI ID | NET COUNTS | BKG/INTERF | CPM | ROI TYPE |
|---------|--------------------|------------|--|----------|
| ROI # 2 | 1.0 \pm 1.5 | 1.01 | $8.11\text{E}-03 \pm 0.012$ | Unknown |
| ROI # 3 | 3.3 \pm 2.0 | 0.68 | 0.027 ± 0.017 | Unknown |
| ROI # 4 | -0.5 \pm 0.3 | 0.51 | $-4.17\text{E}-03 \pm 2.41\text{E}-03$ | Unknown |
| ROI # 4 | 1,140.5 \pm 33.8 | 2.53 | 9.374 ± 0.278 | Unknown |

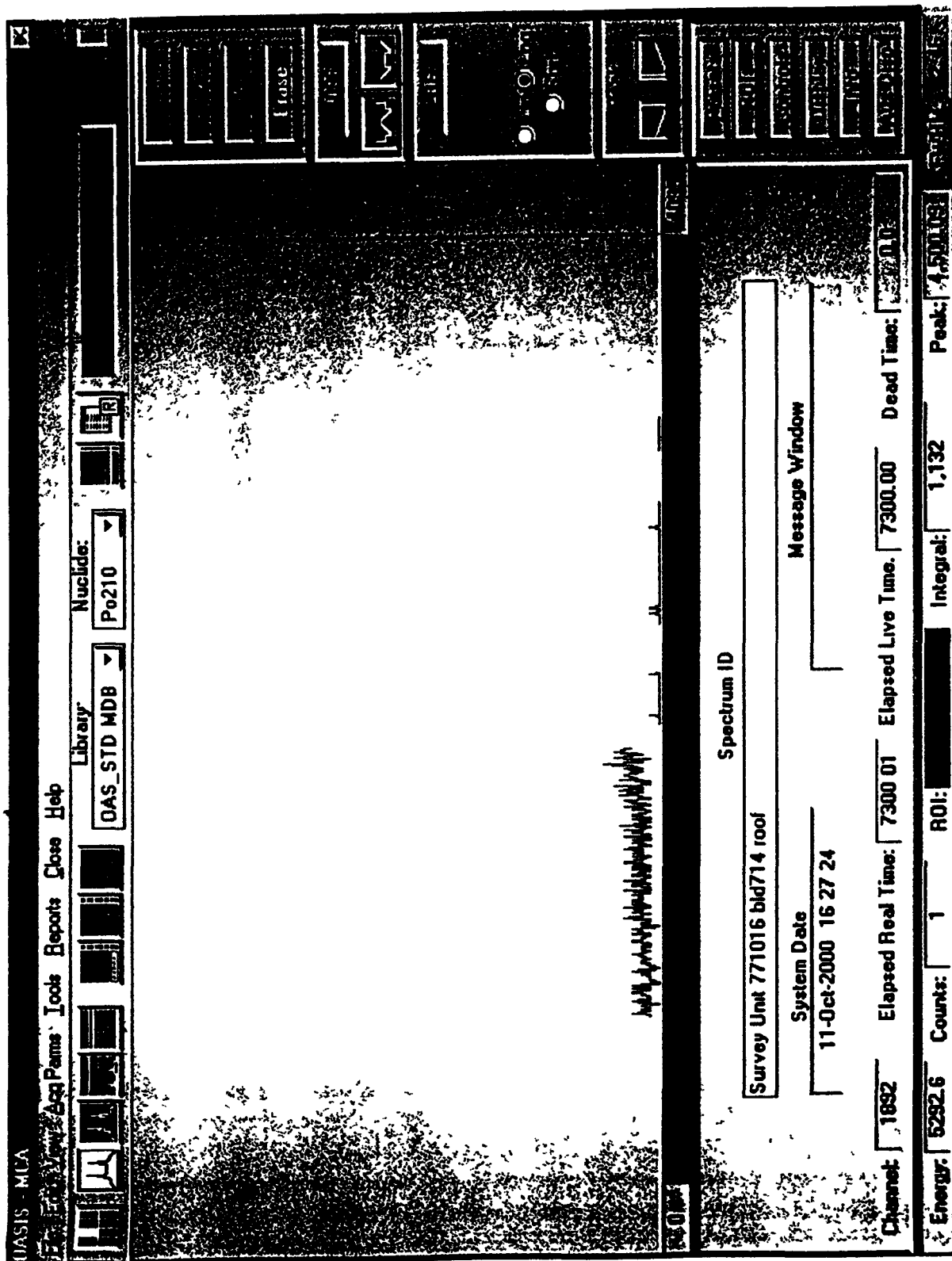
NUCLIDE ANALYSIS RESULTS

| ROI ID | ASSOC NUC | EMM. PROB | ACTIVITY (dpm/samp) | MDA (dpm) |
|---------|-----------|-----------|--|-------------------|
| ROI # 2 | Po218 | 1.000 | 0.024 ± 0.037 | $1.56\text{E}-01$ |
| ROI # 3 | Po214 | 1.000 | 0.083 ± 0.050 | $1.40\text{E}-01$ |
| ROI # 4 | Po212 | 1.000 | $-1.26\text{E}-02 \pm 7.27\text{E}-03$ | $1.30\text{E}-01$ |
| ROI # 4 | Po210 | 1.000 | 28.306 ± 0.920 | $2.08\text{E}-01$ |

Activity reported as of October 11, 2000 14:07:22

ANALYSIS REVIEWED BY: Cy A. Khan

APPROVED BY: CJ Biancamano 10-12-00



Sample ID: Surv Unit 771016 bld 714A roof Type: Unknown

Batch ID: unknowns
Acquisition Start: October 11, 2000 11:27:51
Analysis Date: October 11, 2000 13:32:00
Procedure: Po210 count
Device: Oasis:01:01
Analysis Method: ROI Analysis
Spectrum File: 00001710.OXS LiveTime: 7,300.00

Calibrations:
Energy = 5.420E+01 +2.768E+00 * Chn Coeff. of Correlation: -0.998
Calibration Date: August 16, 2000 08:13:56 Std: TS4189b
Shape not Calibrated.
Efficiency = 3.312E-01 ± 4.399E-03
Calibration Date: August 16, 2000 13:23:16 Std: TS4189b

External Recovery No Ext.Recovery

Original Sample Amount: 1.000 ± 0.000 samp
Aliquot Amount: 1.000 ± 0.000 samp

ROI DATA

| ROI ID | ASSOCIATED | EXTENTS | PK EN | FWHM |
|-----------|------------|--------------------|--------|-------|
| # | NUCLIDE | START END | (keV) | (keV) |
| 1 ROI # 2 | Po218 | 5556.4 6103.7 | 5828.9 | 2.8 |
| 2 ROI # 3 | Po214 | 6589.7 7877.5 | 7232.4 | 2.8 |
| 3 ROI # 4 | Po212 | 8394.4 8749.3 | 8572.3 | 2.8 |
| 4 ROI # 4 | Po210 | 2521.2 5360.8 | 5286.3 | 12.5 |

ROI ANALYSIS RESULTS

| ROI ID | NET COUNTS | BKG/INTERF | CPM | ROI TYPE |
|---------|--------------|------------|----------------------|----------|
| ROI # 2 | 0.0 ± 1.1 | 1.01 | -1.14E-04 ± 8.90E-03 | Unknown |
| ROI # 3 | 0.3 ± 1.1 | 0.68 | 2.66E-03 ± 8.68E-03 | Unknown |
| ROI # 4 | 2.5 ± 1.8 | 0.51 | 0.020 ± 0.014 | Unknown |
| ROI # 4 | 959.5 ± 31.0 | 2.53 | 7.886 ± 0.255 | Unknown |

NUCLIDE ANALYSIS RESULTS

| ROI ID | ASSOC NUC | EMM. PROB | ACTIVITY (dpm/samp) | MDA (dpm) |
|---------|-----------|-----------|------------------------|--------------|
| ROI # 2 | Po218 | 1.000 | -3.45E-04 ± 0.027 | 1.56E-01 |
| ROI # 3 | Po214 | 1.000 | 8.04E-03 ± 0.026 | 1.40E-01 |
| ROI # 4 | Po212 | 1.000 | 0.062 ± 0.044 | 1.30E-01 |
| ROI # 4 | Po210 | 1.000 | 23.814 ± 0.832 | 2.08E-01 |

Activity reported as of October 11, 2000 11:27:51

ANALYSIS REVIEWED BY: C. J. Brannon

APPROVED BY: C. J. Brannon 10-12-00

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Sample ID: Survey bldg 714A coupon loc#3 **Type:** Unknown
Batch ID: unknowns
Acquisition Start: October 30, 2000 11:11:36
Analysis Date: October 30, 2000 14:15:15
Procedure: Po210 count
Device: Oasis:01:01
Analysis Method: ROI Analysis
Spectrum File: 00001857.OXS **LiveTime:** 10,800.00

Calibrations:

Energy = 5.420E+01 +2.768E+00 • Chn Coeff. of Correlation: -0.998
 Calibration Date: August 16, 2000 08:13:56 Std: TS4189b
 Shape not Calibrated.
 Efficiency = 3.312E-01 ± 4.399E-03
 Calibration Date: August 16, 2000 13:23:16 Std: TS4189b

External Recovery No Ext.Recovery

Air Filter Analysis Parameters:

Sample Type: Unknown
Air Filter Time on: October 30, 2000 11:06:55
Air Filter Time off: October 30, 2000 11:06:55
Total Collect Time: 0.000 hours
Average Flow Rate: 40.000 cfm
Air Volume: 1.000 ± 0.000 samp

ROI DATA

| ROI ID # | ASSOCIATED NUCLIDE | EXTENTS START | EXTENTS END | PK EN (keV) | FWHM (keV) |
|-----------|--------------------|---------------|-------------|-------------|------------|
| 1 ROI # 2 | Po218 | 5556.4 | 6103.7 | 5828.9 | 2.8 |
| 2 ROI # 3 | Po214 | 6589.7 | 7877.5 | 7232.4 | 4.2 |
| 3 ROI # 4 | Po212 | 8394.4 | 8749.3 | 8572.3 | 2.8 |
| 4 ROI # 4 | Po210 | 2521.2 | 5333.1 | 5264.1 | 10.2 |

ROI ANALYSIS RESULTS

| ROI ID | NET COUNTS | BKG/INTERF | CPM | ROI TYPE |
|---------|--------------|------------|---------------|----------|
| ROI # 2 | 4.4 ± 2.2 | 0.58 | 0.025 ± 0.012 | Unknown |
| ROI # 3 | 7.7 ± 2.8 | 0.29 | 0.043 ± 0.016 | Unknown |
| ROI # 4 | 6.9 ± 2.6 | 0.15 | 0.038 ± 0.015 | Unknown |
| ROI # 4 | 832.8 ± 29.0 | 5.18 | 4.627 ± 0.161 | Unknown |

NUCLIDE ANALYSIS RESULTS

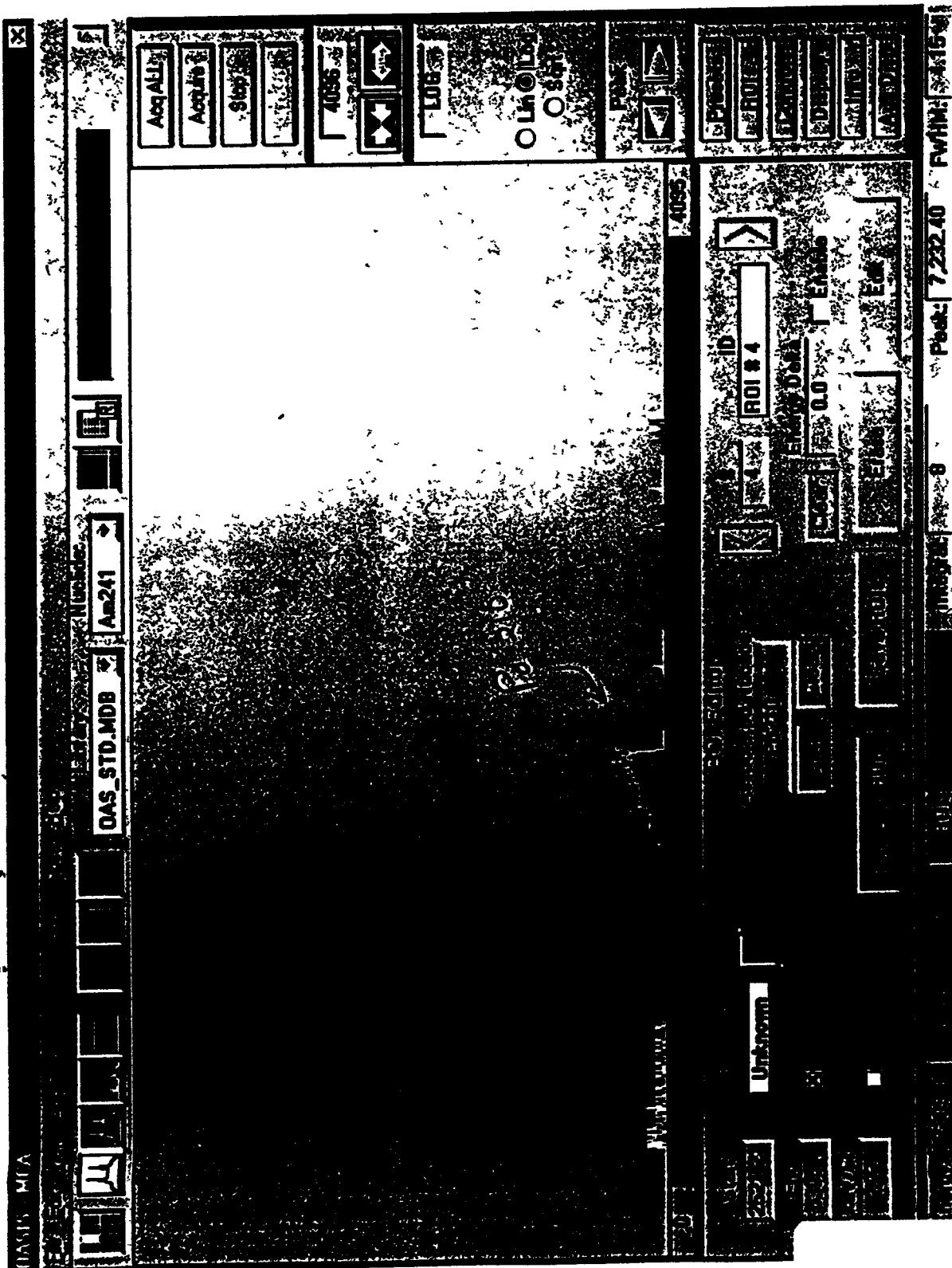
| ROI ID | ASSOC NUC | EMM. PROB | ACTIVITY (dpm/samp) | MDA (dpm/samp) |
|---------|-----------|-----------|---------------------|----------------|
| ROI # 2 | Po218 | 1.000 | 0.074 ± 0.038 | 8.85E-02 |
| ROI # 3 | Po214 | 1.000 | 0.129 ± 0.048 | 7.58E-02 |
| ROI # 4 | Po212 | 1.000 | 0.115 ± 0.044 | 6.69E-02 |
| ROI # 4 | Po210 | 1.000 | 13.972 ± 0.520 | 1.74E-01 |

Activity reported as of October 30, 2000 11:11:36

ANALYSIS REVIEWED BY: Greg A. Hae

APPROVED BY:

CJ Biancamano 10.31.00



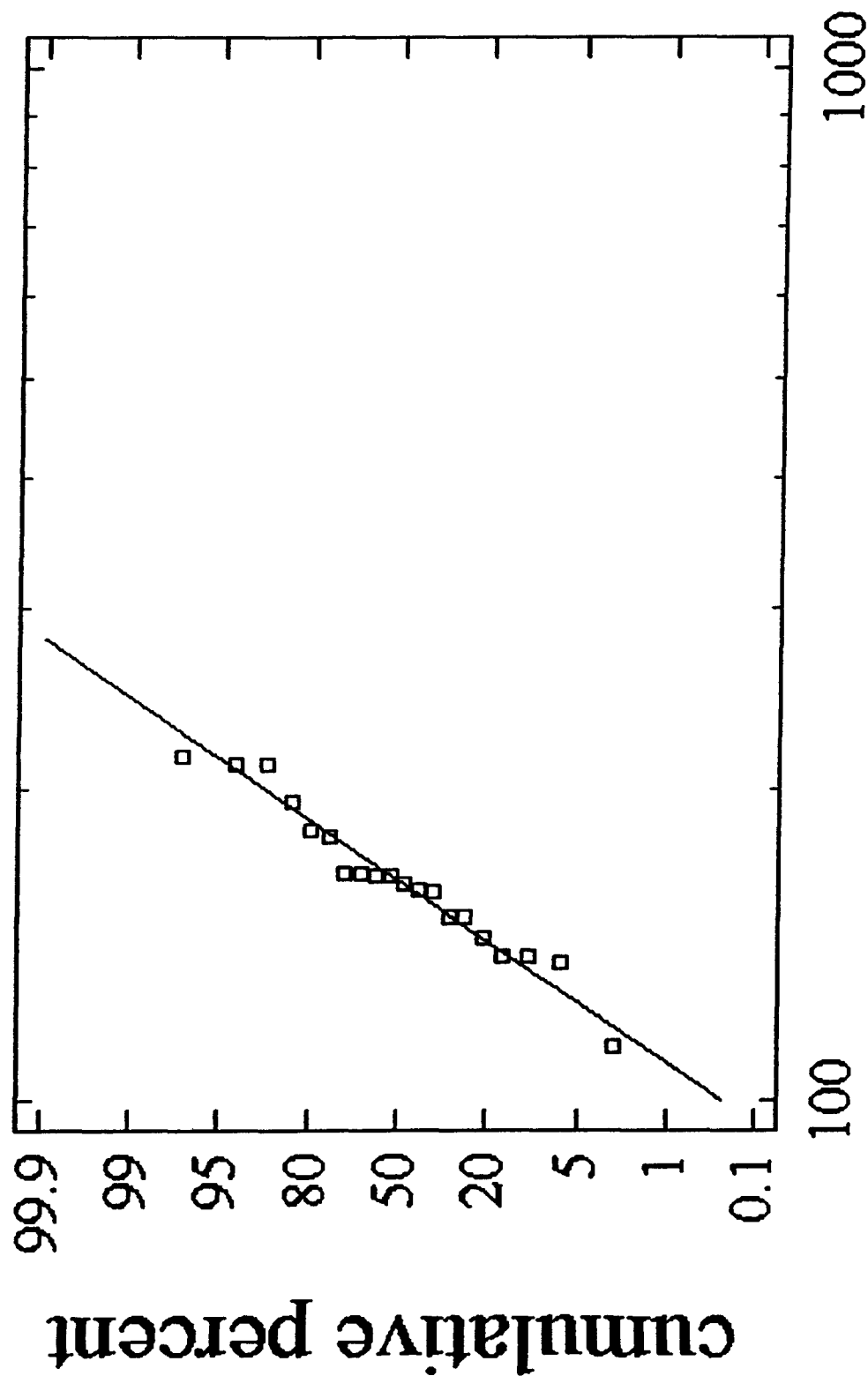
Survey Unit 771017 Po-210 Investigation

| | | |
|--------------------------|----------------|----------------|
| Instrument #: | 1552 | 2378 |
| Cal. Due Date: | 10/7/00 | 11/1/00 |
| Efficiency (c/d): | 0.2226 | 0.2295 |

| Gross Result (cpm) | Efficiency (c/d) | Net Result (dpm/100 cm²) |
|-------------------------------|-----------------------------|--|
| 36 7 | 0 2226 | 165 |
| 32 0 | 0.2226 | 144 |
| 40 0 | 0 2226 | 180 |
| 30 7 | 0 2226 | 138 |
| 48 0 | 0.2226 | 216 |
| 36 7 | 0.2226 | 165 |
| 36 0 | 0.2226 | 162 |
| 30 7 | 0 2226 | 138 |
| 35 3 | 0.2226 | 159 |
| 43 3 | 0 2226 | 195 |
| 36 7 | 0.2295 | 160 |
| 31 3 | 0.2295 | 136 |
| 42 0 | 0 2295 | 183 |
| 26 0 | 0 2295 | 113 |
| 48 7 | 0.2295 | 212 |
| 48 7 | 0 2295 | 212 |
| 38 0 | 0.2295 | 166 |
| 34 7 | 0.2295 | 151 |
| 38 0 | 0.2295 | 166 |
| 34.7 | 0.2295 | 151 |

786

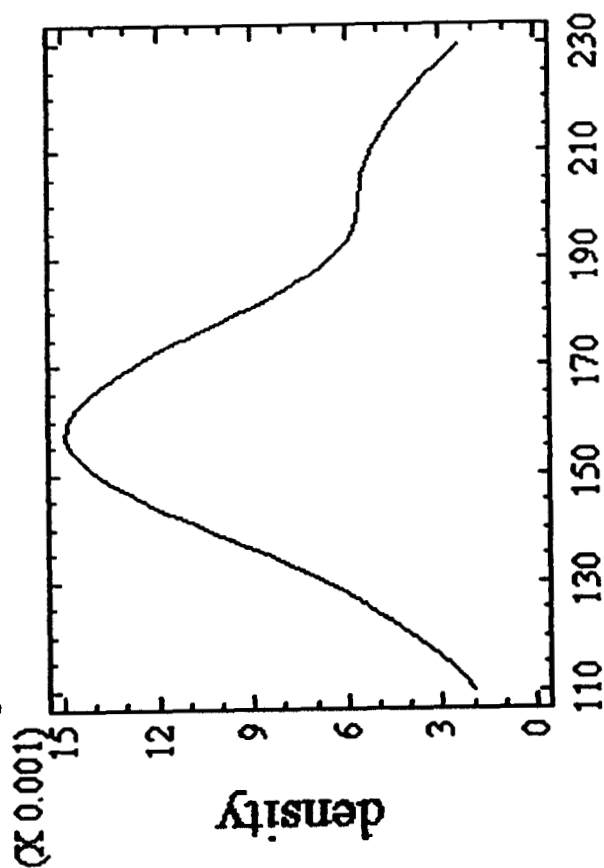
Lognormal Probability Plot



Survey Unit 779017 dpm

Since the smallest p-value amongst the tests performed is less than 0.10, we can reject the idea that Survey Unit 779017 dpm comes from a lognormal distribution with 90% confidence.

Density Trace for Survey Unit 779017 dpm



Survey Unit 779017 dpm

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Sample ID: Survey Unit 771017 coupon flat **Type:** Unknown
Batch ID: unknowns
Acquisition Start: October 10, 2000 13:37:41
Analysis Date: October 10, 2000 15:45:26
Procedure: Po210 count
Device: Oasis:01:01
Analysis Method: ROI Analysis
Spectrum File: 00001695.OXS **LiveTime:** 7,600.00

Calibrations:

Energy = $5.420\text{E}+01 + 2.768\text{E}+00 \cdot \text{Chn}$ **Coeff. of Correlation:** -0.998
Calibration Date: August 16, 2000 08:13:56 **Std:** TS4189b
 Shape not Calibrated.
Efficiency = $3.312\text{E}-01 \pm 4.399\text{E}-03$
Calibration Date: August 16, 2000 13:23:16 **Std:** TS4189b

External Recovery No Ext.Recovery

Original Sample Amount:

1.000 ± 0.000 samp

Aliquot Amount:

1.000 ± 0.000 samp

ROI DATA

| ROI ID # | ASSOCIATED NUCLIDE | EXTENTS | | PK EN (keV) | FWHM (keV) |
|-------------|-----------------------|---------|--------|----------------|---------------|
| | | START | END | | |
| 1 ROI # 2 | Po218 | 5556.4 | 6103.7 | 5828.9 | 2.8 |
| 2 ROI # 3 | Po214 | 6589.7 | 7877.5 | 7232.4 | 2.8 |
| 3 ROI # 4 | Po212 | 8394.4 | 8749.3 | 8572.3 | 4.2 |
| 4 ROI # 4 | Po210 | 2521.2 | 5416.1 | 5280.8 | 4.3 |

ROI ANALYSIS RESULTS

| ROI ID | NET COUNTS | BKG/INTERF | CPM | ROI TYPE |
|---------|--------------------|------------|-----------------------------|----------|
| ROI # 2 | 0.9 ± 1.5 | 1.06 | $7.46\text{E}-03 \pm 0.012$ | Unknown |
| ROI # 3 | 8.3 ± 3.0 | 0.70 | 0.065 ± 0.024 | Unknown |
| ROI # 4 | 7.5 ± 2.8 | 0.53 | 0.059 ± 0.022 | Unknown |
| ROI # 4 | $1,309.2 \pm 36.2$ | 2.81 | 10.336 ± 0.286 | Unknown |

NUCLIDE ANALYSIS RESULTS

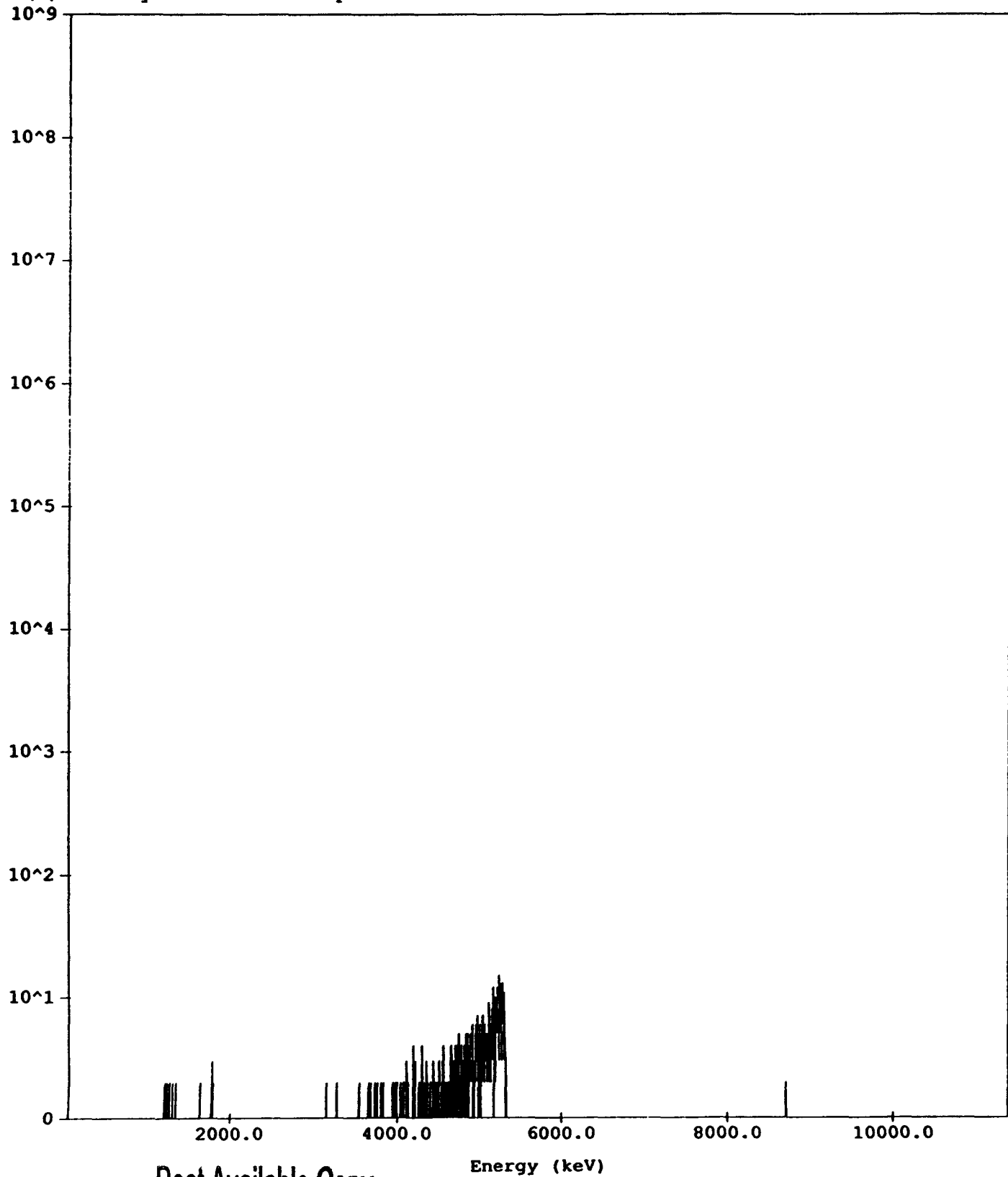
| ROI ID | ASSOC NUC | EMM. PROB | ACTIVITY (dpm/samp) | MDA (dpm) |
|---------|-----------|-----------|------------------------|-------------------|
| ROI # 2 | Po218 | 1.000 | 0.023 ± 0.035 | $1.52\text{E}-01$ |
| ROI # 3 | Po214 | 1.000 | 0.198 ± 0.072 | $1.36\text{E}-01$ |
| ROI # 4 | Po212 | 1.000 | 0.178 ± 0.068 | $1.26\text{E}-01$ |
| ROI # 4 | Po210 | 1.000 | 31.211 ± 0.958 | $2.07\text{E}-01$ |

Activity reported as of October 10, 2000 13:37:41

ANALYSIS REVIEWED BY: Ly Pflaue

APPROVED BY. CJ Brunson 10.11.00

File(3): 00001695.OXS Date: 10-Oct-2000 13:37:41 LT: 7,600.00 RT: 7,601.03
ID(3): Survey Unit 771017 coupon flat



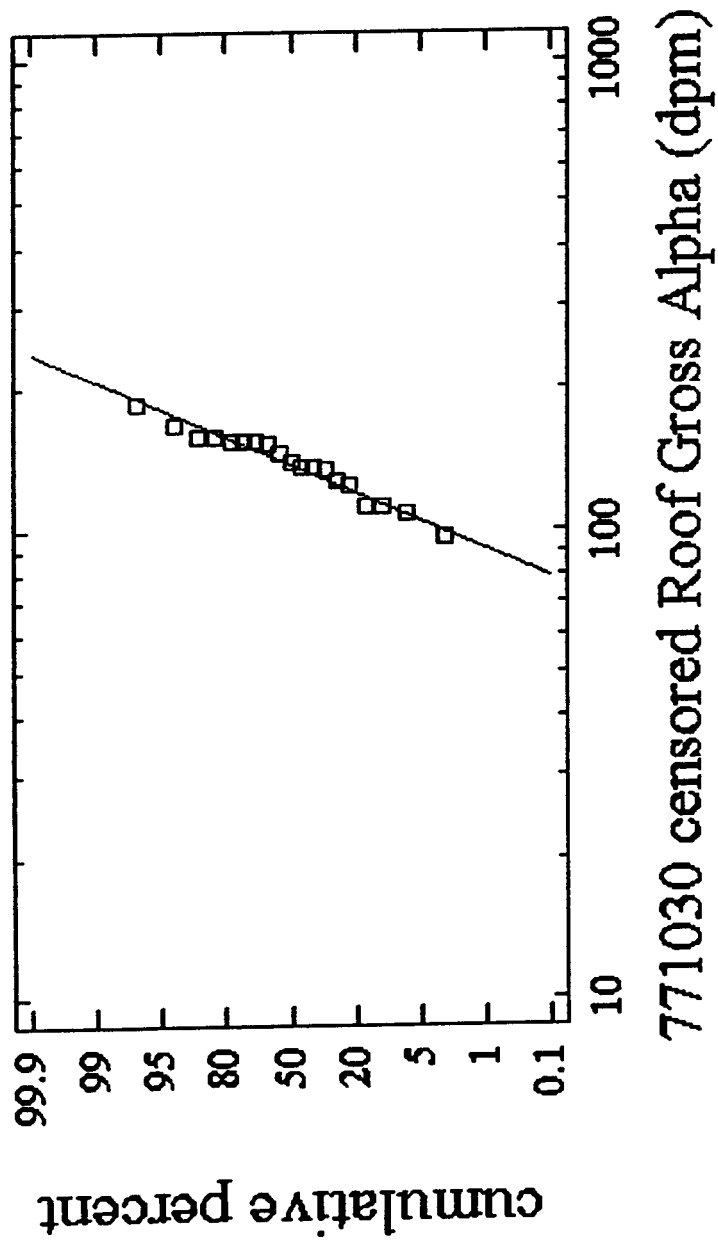
Survey Unit 771030 Po-210 Investigation

| | |
|--------------------------|----------------|
| Instrument #: | 1402 |
| Cal. Due Date: | 12/1/00 |
| Efficiency (c/d): | 0.2149 |

| Gross Result (cpm) | Efficiency (c/d) | Net Result (dpm/100 cm²) |
|-------------------------------|-------------------------|--|
| 20 8 | 0.2149 | 97 |
| 34 0 | 0.2149 | 158 |
| 24 0 | 0.2149 | 112 |
| 31 3 | 0.2149 | 146 |
| 33 3 | 0.2149 | 155 |
| 9 3 | 0.2149 | 43 |
| 23 3 | 0.2149 | 108 |
| 32 7 | 0.2149 | 152 |
| 30 0 | 0.2149 | 140 |
| 34 0 | 0.2149 | 158 |
| 26 7 | 0.2149 | 124 |
| 29 3 | 0.2149 | 136 |
| 27.3 | 0.2149 | 127 |
| 40 0 | 0.2149 | 186 |
| 33 3 | 0.2149 | 155 |
| 33 3 | 0.2149 | 155 |
| 28 7 | 0.2149 | 134 |
| 29 3 | 0.2149 | 136 |
| 36.0 | 0.2149 | 168 |
| 24 0 | 0.2149 | 112 |

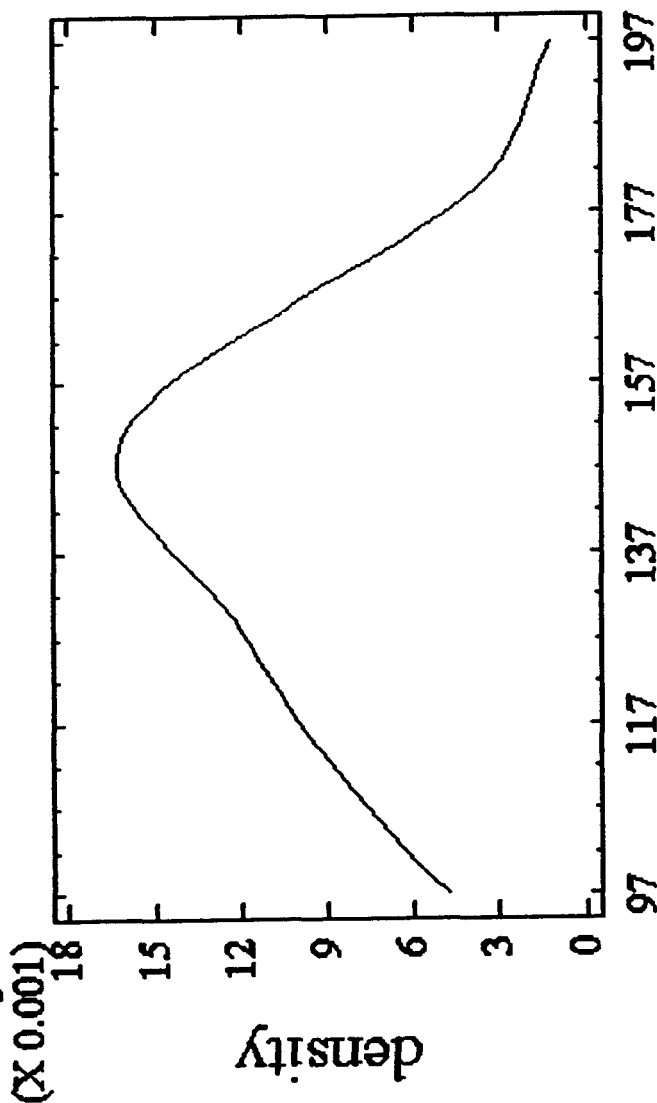
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Lognormal Probability Plot



Since the smallest P-value amongst the tests performed is greater than or equal to 0.10, we can not reject the idea that 771030 Po210 Investigation comes from a lognormal distribution with 90+ or higher confidence.

Density Trace for Censored 771030 Po210 Investigation



771030 Roof Gross Alpha (dpm)

ATTACHMENT AC

Minimum Detectable Concentration (MDC) Calculations

MDC Calculations for NE Electra and SAC-4

The purpose of this calculation is to document the basis for the count time for the NE Electra DP6-BD probe (utilized to measure total surface activity) and the Eberline SAC-4 (utilized to measure removable surface activity) during the performance of the reconnaissance level characterization (RLC) in the Building 771 Cluster

The *a priori* MDC for the NE Electra and SAC-4 are calculated using the equation derived by Strom and Stansbury, 1992. The equation is provided below:

(1)

$$MDC = \frac{3 + 3.29 \sqrt{R_b t_s \left(1 + \frac{t_s}{t_b}\right)}}{E_T (A/100) t_s}$$

Where

| | | |
|-------|---|---|
| R_b | = | background counting rate (cpm) |
| t_s | = | sample counting time interval (min) |
| t_b | = | background counting time (min) |
| E_T | = | total 4π efficiency (c/d) |
| A | = | surface area measured/sampled (cm^2) |

The parameters and calculation results for the NE Electra are as follows

| Background Count Rate (cpm) ⁽¹⁾ | Background Count time (min) | Sample Count Time (min) | Total Efficiency (c/d) ⁽²⁾ | Probe Area (cm^2) | MDC (dpm/100 cm^2) ⁽¹⁾ |
|--|-----------------------------|-------------------------|---------------------------------------|------------------------------|---|
| 4.3 | 1.5 | 1.5 | 0.20 | 100 | 49 |

(1) Calculated based on average observed Local Area Background (LAB) for the Type 1 survey units (408 individual measurements)

(2) Based on the lowest applied efficiency value

The parameters and calculation results for the SAC-4 are as follows

| Background Count Rate (cpm) ⁽³⁾ | Background Count time (min) | Sample Count Time (min) | Total Efficiency (c/d) | Probe Area (cm^2) | MDC (dpm/100 cm^2) ⁽¹⁾ |
|--|-----------------------------|-------------------------|------------------------|------------------------------|---|
| 0.3 | 10 | 2 | 0.33 | 100 | 9 |

(3) Calculated based on average observed Local Area Background (LAB) for the Type 1 survey units (107 individual measurements)

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Per the requirements in the site Pre-Demolition Survey Plan, the *a priori* MDC for each instrument shall be less than 50% of the DCGL. Accordingly, the sample and background count times for the NE Electra should be a minimum of ninety (90) seconds; and the sample and background count times for the SAC-4 should be a minimum of two-minutes and ten minutes, respectively

PREPARED BY

J Roberts / J Dolan
Radiological Engineer

PEER REVIEWED BY

CJ Bianco / CJ Bianco - CHP
Radiological Engineer

297



INTEROFFICE MEMORANDUM

DATE December 13, 1999

TO FILE

FROM S Roberts, Radiological Engineer, Bldg 779

SUBJECT PERFORMANCE OF SCAN SURVEYS WITH THE BICRON/NE DP8 PROBE FOR BUILDING 779 CLUSTER FINAL STATUS SURVEYS - Revision 2 - SJR-004-99

The purpose of this memorandum is to document the basis for the scan method with the Bicon NE Electra DP8 probe during the performance of final status alpha surveys in the Building 779 Cluster

Scans will be performed with the DP8 probe by collecting a 10-second static count at each location. Thus, if a one hundred percent scan were required, a measurement would be collected at each 600 cm² area (detector active area) across the surface. The minimum detectable concentration is calculated using the following equation

$$MDC = \frac{2.71 + 3.29 \sqrt{R_b t_s (1 + \frac{t_s}{t_b})}}{E_T (A/100) t_s}$$

Where

- R_b = background counting rate
- t_s = sample counting time interval
- t_b = background counting time
- E_T = total 4π efficiency
- A = physical surface area of the detector (or the area samples for smears)

The parameters and calculation results are provided below

(A)

| Background Count Rate (cpm) ⁽¹⁾ | Background Count time (m) | Sample Count Time (m) | Instrument Efficiency (c/d) ⁽²⁾ | Probe Area (cm ²) | MDC (dpm/100 cm ²) |
|--|---------------------------|-----------------------|--|-------------------------------|--------------------------------|
| 15 | 0.166 | 0.166 | 0.13 | 600 | 78 |

(1) Represent maximum-typical observed background

(2) Selected from the low end of the nominal range of values for the NE Electra efficiency

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In order to demonstrate that the detector is capable of detecting 100 cm² "hot-spots", the MDC was calculated again with the parameters provided below

(B)

| Background Count Rate (cpm) | Background Count time (m) | Sample Count Time (m) | Instrument Efficiency ⁽¹⁾ (c/d) | Probe Area (cm ²) ⁽²⁾ | MDC (dpm/100 cm ²) |
|-----------------------------|---------------------------|-----------------------|--|--|--------------------------------|
| 0 | 0 166 | 0 166 | 0 13 | 100 | 126 |

(1) Represents the average efficiency for the DP8 probe

(2) Actual probe area is 600 cm²

The assumed background count rate is 0 cpm due to the fact that the 779 final survey will consider ALL detected counts (when scanning with the DP8 probe) DOE-added activity. A "virtual" probe area of 100 cm² is assumed in order to prove that a 100 cm² "hot-spot" would be detected.

In conclusion, the MDC is approximately 50% of the DCGL_{EMC} of 300 dpm/100 cm² for both distributed areas of contamination (A) and small-areas of contamination (B).

The flowchart outlining the use of the DP8 probe is included as Attachment A. The shaded areas provide an explanation for the cited values and will not be included on the flowcharts for field use.

PEER REVIEWED BY

Jeff A. Thompson 12-13-99
Radiological Engineer

CONCURRENCE

Jeff Barroso 12/15/99
Jeff Barroso, Bldg 779 Deputy Radiological Safety Manager

CONCURRENCE

Bates Estabrooks 12/13/99
Bates Estabrooks, Radiological Engineering Support Services Manager

CC

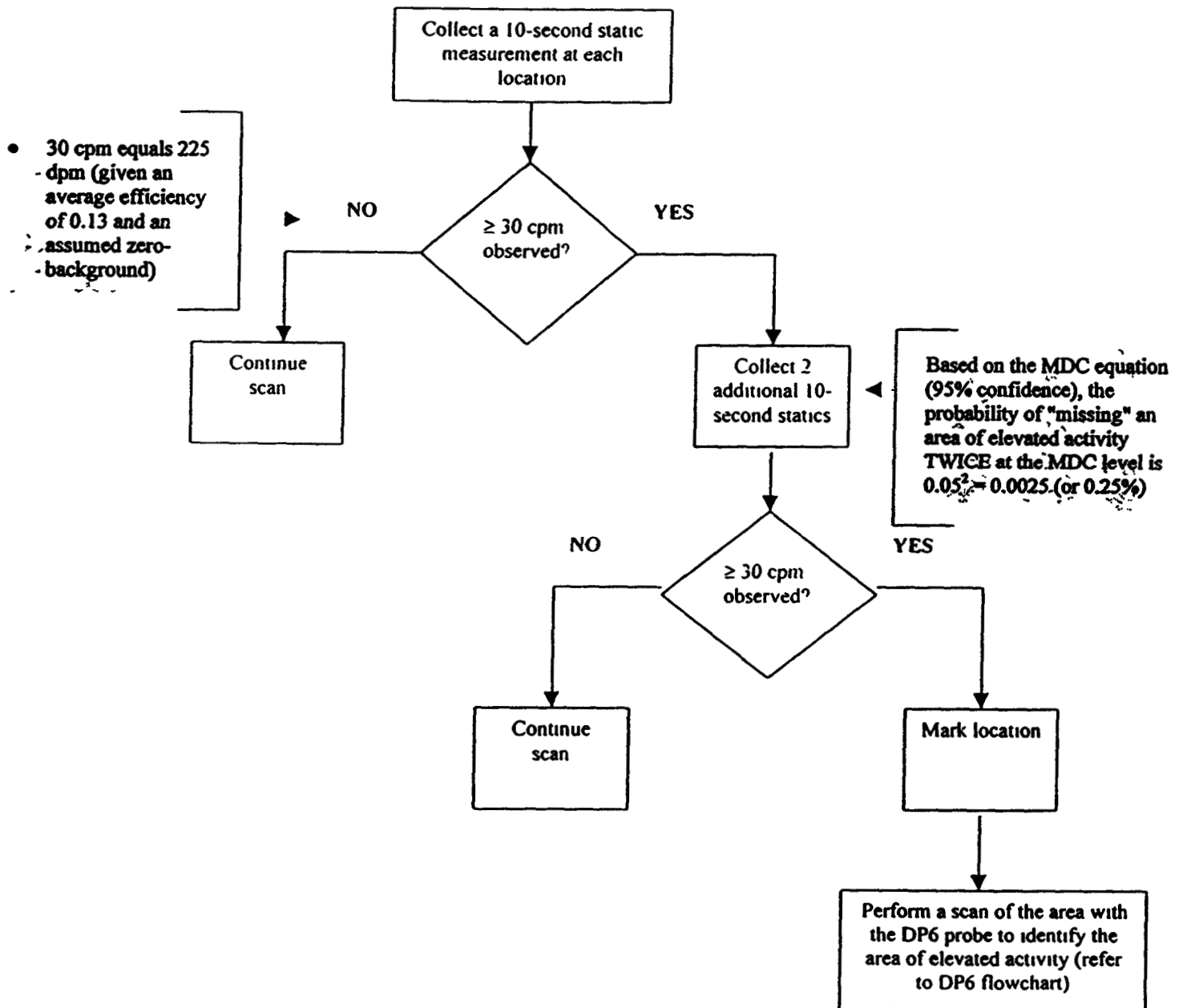
M Grube

E Leses

J Thompson

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Attachment A
Alpha Scan Method with DP8A
Revision 1





INTEROFFICE MEMORANDUM

DATE July 1, 1999

TO FILE

FROM S Roberts, Radiological Engineer, Bldg 779 *SR*

SUBJECT ALPHA SCAN RATES FOR BUILDING 779 CLUSTER FINAL STATUS SURVEYS
- SJR-001-99

The purpose of this memorandum is to document the basis for the scan rate associated with the Bicon NE Electra DP6-BD probe during the performance of final status alpha surveys in the Building 779 Cluster

The scan rate for the NE Electra was calculated using the method identified in Section 6.7.2, *Scanning Sensitivity*, in MARSSIM. The scan rate is based on the probability of detection by use of Poisson summation statistics. The equations below describe (1) the probability of detecting a single count while passing over a contaminated area (given a known scan rate and surface contamination $DCGL_{EMC}$) and (2) the time that a surveyor should stop and wait until the probability of getting another count is at least 90%.

(1)

$$P(n \geq 1) = 1 - e^{-\frac{GE_T d}{60v}}$$

Where

$P(n \geq 1)$ = probability of observing a single count
 G = contamination activity (dpm)
 E_T = total efficiency (4π)
 d = width of detector in direction of scan
 v = scan speed (cm/s)

(2)

$$t = \frac{13,800}{CAE}$$

Where

t = time period for static count (s)
 C = release criteria (dpm/100 cm^2)
 A = physical probe area (cm^2)
 E = detector efficiency (4π)

The parameters and calculation results are provided below

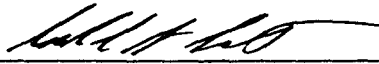
| Contamination Activity G (dpm) | Total Eff E_T (c/d) ⁽¹⁾ | detector width in cm d | Scan Rate y (cm/s) | Dwell time over source t_d (s) | $P(p > E)$ | Release criteria C (dpm/100 cm ²) | Physical Probe Area A (cm ²) | Time period for static count t (s) |
|----------------------------------|--------------------------------------|--------------------------|----------------------|----------------------------------|------------|---|--|--------------------------------------|
| 225 | 0.16 | 7 | 3.8 | 1.8 | 67% | 225 | 100 | 4 |

(1) Selected from the low end of the nominal range of values for the NE Electra efficiency

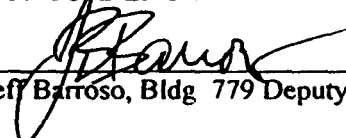
Thus, upon initial detection of a single count, the surveyor should pause over the area for 4 seconds. If one or more counts is observed in that time interval (equivalent to 15 cpm on NE Electra display) the surveyor should perform a minimum one-minute PAT on the area.

In conclusion, given the total alpha contamination action level of 225 dpm/100 cm² (75% of DCGL_{1MC}) and a probability of detection of 67%, the appropriate scan rate is 1.5 in/s (~3.81 cm/s). This scan rate is consistent with the scan rate requirement in the "Closeout Radiological Survey Plan for the 779 Cluster" Revision 2.


PEER REVIEWED BY

 7/2/99
Radiological Engineer

CONCURRENCE

 7/6/99
Jeff Barroso, Bldg 779 Deputy Radiological Safety Manager

CONCURRENCE

 7/2/99
Bates Estabrooks, Radiological Engineering Support Services Manager

CC

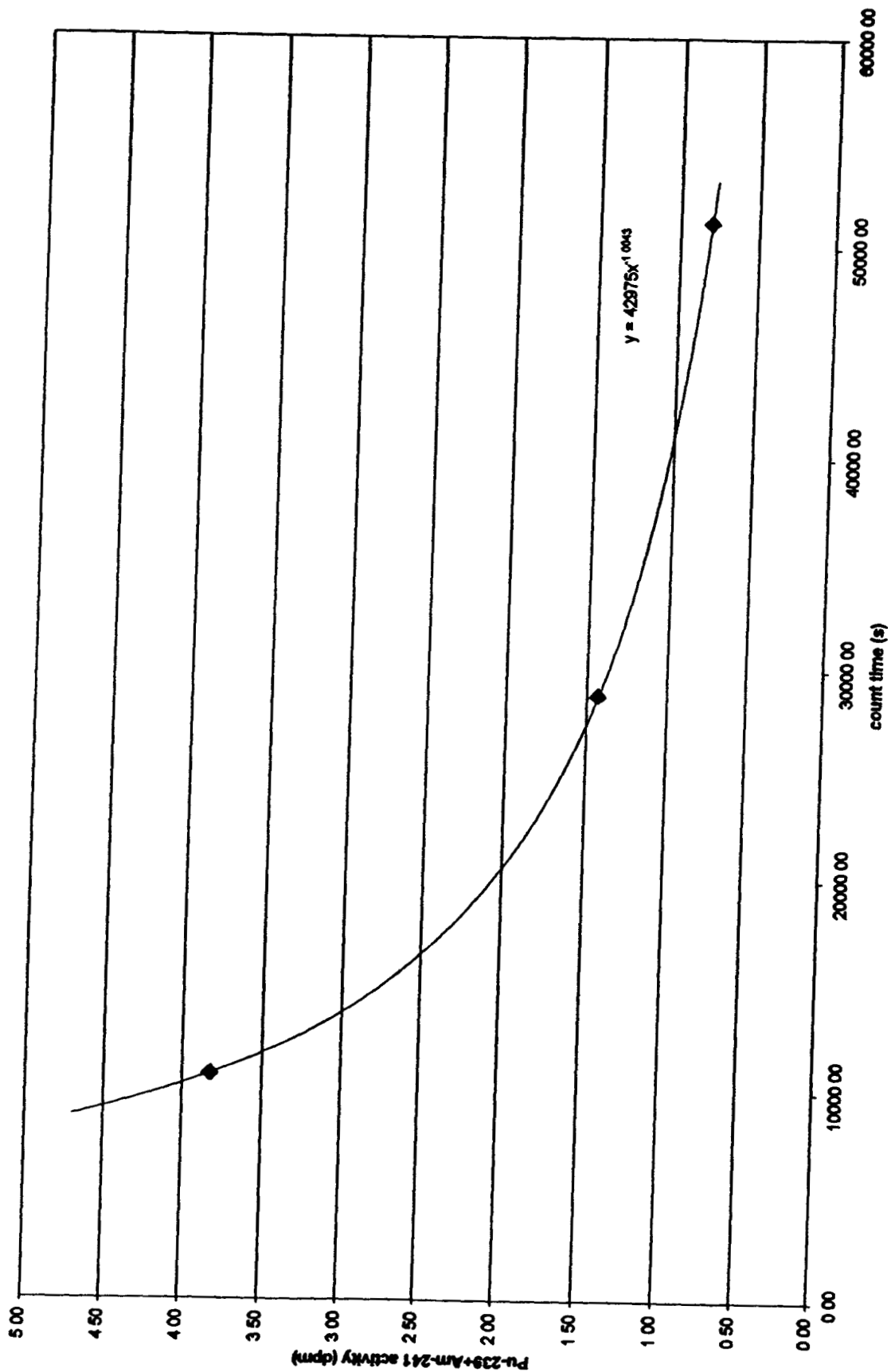
M Grube

E Lesses

J Thompson

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OASIS sensitivity estimates for 1-in roof coupons



| OASIS sensitivity in dpm/100cm ² for 1.79 in roof coupons with a 7200 -s count time | | | |
|--|---------------|---------------|----------|
| <u>Pu-239+Am-241</u> | <u>Pu-239</u> | <u>Am-241</u> | <u>U</u> |
| 12 | 10 | 1 | 12 |

coupon area calculations

| | | |
|------------------------|----------------------|-----------------------|
| d1= | 1 in | 1.79 in |
| d2= | 0.22 in | 0.28 in |
| A= | 4.82 cm ² | 15.87 cm ² |
| 100cm ² /A= | 20.73 | 6.30 |
| A ratio= | 3.29 | |

efficiency calculations (Mohagheghi 1998)

particles uniformly distributed on filter

source radius less than detector radius

$$\text{eff} = \Omega/4\pi = 2\pi (1 - \cos \alpha * \{ 1 + (3/2)(r^2/d^2)(\sin 2\alpha/4)^2 \}) / 4\pi$$

| | | | |
|------------|---------|---------|-------------------------------|
| a = | 2.33 cm | 2.33 cm | = detector radius |
| r = | 1.27 cm | 2.28 cm | = source radius |
| d = | 0.6 cm | 0.6 cm | = source to detector distance |
| α = | 1.32 | 1.32 | = atan (a/d) |
| eff = | 0.363 | 0.336 | |
| eff ratio | 0.93 | | |

$$\text{WGPu } \alpha = 0.88 \text{ Pu-239} + 0.12 \text{ Am-241 (experimentally determined in B771)}$$

sensitivity calculations

Pu/Am sensitivity 1"

samples (TBD-00153)

$$Y = 42975x^{-1.0043}$$

time (s)

dpm

corrected
for area
dpmcorrected
for eff
dpmsensitivity in dpm/100cm²

Pu-239

+Am-241Pu-239Am-241U

12

10

1

12

references

Mohagheghi, A. H.; Ghanbari F.; Ebara, S. B ; Enghauser M. E.; Bakhtiar, S. N
Direct analysis of air filter samples for alpha emitting isotopes.
Journal of Radioanalytical and Nuclear Chemistry, Vol. 234 (1-2), 1998.

USE OF OASIS FOR DIRECT DIFFERENTIATION OF PO-210

TBD-00153 Revision 0

C. J. Bianconi 05/10/2000

ATTACHMENT AD

Survey Unit 7710035 Data Summary

Survey Unit 771035 Data Summary

Total Surface Activity Measurements

| 15 | 15 |
|-----------------|-----------------|
| Number Required | Number Obtained |

| | PRE | POST |
|---------|------|------|
| MIN | -0.8 | 7.3 |
| MAX | 23.6 | 31.8 |
| MEAN | 9.4 | 14.1 |
| STD DEV | 6.7 | 7.3 |

| | | | |
|----------------------------------|-----|-----|-------------------------|
| TRANSURANIC DCGL _w | 100 | 100 | dpm/100 cm ² |
|----------------------------------|-----|-----|-------------------------|

Removable Activity Measurements

| 15 | 15 |
|-----------------|-----------------|
| Number Required | Number Obtained |

| | PRE | POST |
|---------|------|------|
| MIN | -1.5 | -1.5 |
| MAX | 4.5 | 6.7 |
| MEAN | 1.1 | 1.8 |
| STD DEV | 2.0 | 2.2 |

| | | | |
|-------------------------------|----|----|-------------------------|
| TRANSURANIC DCGL _w | 20 | 20 | dpm/100 cm ² |
|-------------------------------|----|----|-------------------------|

Media Sample Activity

Media Samples

| 15 | 15 |
|-----------------|-----------------|
| Number Required | Number Obtained |

Total Transuranic Results

| | | |
|---------|-------|-------------------------|
| MIN | -0.5 | dpm/100 cm ² |
| MAX | 148.7 | dpm/100 cm ² |
| MEAN | 17.4 | dpm/100 cm ² |
| STD DEV | 42.7 | dpm/100 cm ² |

Survey Unit 771035 Total Surface Contamination Results

| Pre-Sample Total Surface Activity Survey | | | | | Post-Sample Total Surface Activity Survey | | | | |
|---|-------------------------|----------|---------|----------------------------|---|-------------------------|----------|-------|----------------------------|
| Meter Model: | NE Electra w/ DPs Probe | | | | Meter Model: | NE Electra w/ DPs Probe | | | |
| Instrument #: | 2376 | 1803 | 2363 | Local Area Blvd (cpm) | Instrument #: | 1803 | 2363 | N/A | Local Area Blvd (cpm) |
| Cal. Due Date: | 1/10/01 | 1/20/01 | 1/18/01 | | Cal. Due Date: | 1/20/01 | 1/18/01 | N/A | |
| Efficiency (cdf): | 0.22 | 0.217 | 0.214 | | Efficiency (cdf): | 0.217 | 0.214 | N/A | |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) |
| 1 | 2376 | 10/06/00 | 4.0 | 8.0 | 1 | 1803 | 10/06/00 | 6.7 | 19.8 |
| 2 | 2376 | 10/06/00 | 2.7 | -0.8 | 2 | 1803 | 10/06/00 | 5.3 | 12.5 |
| 3 | 2376 | 10/06/00 | 8.0 | 13.9 | 3 | 1803 | 10/06/00 | 4.0 | 7.5 |
| 4 | 2376 | 10/06/00 | 8.0 | 13.9 | 4 | 1803 | 10/06/00 | 6.0 | 18.8 |
| 5 | 2376 | 10/06/00 | 4.0 | 8.0 | 5 | 1803 | 10/06/00 | 9.3 | 31.8 |
| 6 | 2376 | 10/06/00 | 4.7 | 8.1 | 6 | 1803 | 10/06/00 | 6.0 | 18.8 |
| 7 | 2376 | 10/06/00 | 4.0 | 8.0 | 7 | 1803 | 10/06/00 | 5.3 | 13.3 |
| 8 | 2376 | 10/06/00 | 6.7 | 17.0 | 8 | 1803 | 10/06/00 | 4.0 | 7.5 |
| 9 | 1803 | 10/06/00 | 3.3 | 1.9 | 9 | 1803 | 10/06/00 | 4.0 | 7.5 |
| 10 | 1803 | 10/06/00 | 5.3 | 11.2 | 10 | 1803 | 10/06/00 | 4.0 | 7.5 |
| 11 | 1803 | 10/06/00 | 6.7 | 17.6 | 11 | 1803 | 10/06/00 | 5.3 | 13.3 |
| 12 | 1803 | 10/06/00 | 4.3 | 8.8 | 12 | 1803 | 10/06/00 | 7.3 | 22.8 |
| 13 | 1803 | 10/06/00 | 4.7 | 9.4 | 13 | 1803 | 10/06/00 | 6.7 | 19.8 |
| 14 | 1803 | 10/06/00 | 4.0 | 8.2 | 14 | 1803 | 10/06/00 | 4.0 | 7.5 |
| 15 | 1803 | 10/06/00 | 8.0 | 23.8 | 15 | 1803 | 10/06/00 | 4.0 | 7.5 |
| MIN MAX MEAN SD Transmittance DO3 ₄₇ | | | | | MIN MAX MEAN SD Transmittance DO3 ₄₇ | | | | |
| -0.8 23.8 9.4 8.7 100 | | | | | 7.5 31.8 14.1 7.3 100 | | | | |

Best Available Copy

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Survey Unit 771035 Removable Surface Activity Results

| Smear Location Number | Pre-Sample Smear Results | | | | | Post-Sample Smear Results | | | | |
|-----------------------|--------------------------|--------------|----------------|-------------|-------------------------------|---------------------------|--------------|----------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 10/6/00 | 0.0 | 0.0 | -1.2 | 1052 | 10/6/00 | 3.0 | 1.5 | 3.3 |
| 2 | 1351 | 10/6/00 | 0.0 | 0.0 | -1.5 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 |
| 3 | 1354 | 10/6/00 | 1.0 | 0.5 | 0.6 | 1354 | 10/6/00 | 2.0 | 1.0 | 2.1 |
| 4 | 1052 | 10/6/00 | 3.0 | 1.5 | 3.3 | 1052 | 10/6/00 | 2.0 | 1.0 | 1.8 |
| 5 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 | 1351 | 10/6/00 | 4.0 | 2.0 | 4.5 |
| 6 | 1354 | 10/6/00 | 3.0 | 1.5 | 3.6 | 1354 | 10/6/00 | 1.0 | 0.5 | 0.6 |
| 7 | 1052 | 10/6/00 | 2.0 | 1.0 | 1.8 | 1052 | 10/6/00 | 3.0 | 1.5 | 3.3 |
| 8 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 |
| 9 | 1354 | 10/6/00 | 2.0 | 1.0 | 2.1 | 1354 | 10/6/00 | 5.0 | 2.5 | 6.7 |
| 10 | 1052 | 10/6/00 | 0.0 | 0.0 | -1.2 | 1052 | 10/6/00 | 2.0 | 1.0 | 1.8 |
| 11 | 1351 | 10/6/00 | 4.0 | 2.0 | 4.5 | 1351 | 10/6/00 | 0.0 | 0.0 | -1.5 |
| 12 | 1354 | 10/6/00 | 1.0 | 0.5 | 0.6 | 1354 | 10/6/00 | 2.0 | 1.0 | 2.1 |
| 13 | 1052 | 10/6/00 | 0.0 | 0.0 | -1.2 | 1052 | 10/6/00 | 1.0 | 0.5 | 0.3 |
| 14 | 1351 | 10/6/00 | 3.0 | 1.5 | 3.0 | 1351 | 10/6/00 | 3.0 | 1.5 | 3.0 |
| 15 | 1354 | 10/6/00 | 2.0 | 1.0 | 2.1 | 1354 | 10/6/00 | 0.0 | 0.0 | -0.9 |
| | | | | | MIN | | | | | |
| | | | | | MAX | | | | | |
| | | | | | MEAN | | | | | |
| | | | | | SD | | | | | |
| | | | | | Transuranic DCGL _w | | | | | |
| | | | | | 20 | | | | | |

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Survey Unit 771035 Paint/Solid Media Sample Results

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | TRANSURANIC TOTAL (dpm/100cm ²) DCGL W=100 |
|----------------------|------------------------|-----------------|------------|--------|-------------|------------|---------------------------------|--|---|---|
| Room 306, south wall | 1 | 01N0002-001 001 | Pu-239/240 | 0.053 | 0.186 | 2.93 | 26.25 | 0.2 | 0.7 | 0.2 |
| | | | Am-241 | -0.012 | 0.146 | | | 0.0 | 0.6 | |
| | | | Pu-238 | 0.024 | 0.433 | | | 0.1 | 1.7 | |
| Room 306, north wall | 2 | 01N0002-002 001 | Pu-239/240 | 0.413 | 0.164 | 8.57 | 26.25 | 4.6 | 1.8 | 0.2 |
| | | | Am-241 | 0.076 | 0.070 | | | 0.9 | 0.8 | |
| | | | Pu-238 | 0.000 | 0.350 | | | 0.0 | 0.8 | |
| Room 305, ceiling | 3 | 01N0002-003 001 | Pu-239/240 | 0.180 | 0.131 | 12.65 | 26.25 | 3.0 | 2.2 | 5.5 |
| | | | Am-241 | 0.028 | 0.077 | | | 0.5 | 1.3 | |
| | | | Pu-238 | 0.005 | 0.443 | | | 0.1 | 7.3 | |
| Room 303, south wall | 4 | 01N0002-004 001 | Pu-239/240 | 0.076 | 0.172 | 9.65 | 26.25 | 1.0 | 2.2 | 3.5 |
| | | | Am-241 | 0.023 | 0.184 | | | 0.3 | 2.3 | |
| | | | Pu-238 | 0.229 | 0.352 | | | 2.9 | 4.5 | |
| Room 303, floor | 5 | 01N0002-005 001 | Pu-239/240 | 3.200 | 0.129 | 25.48 | 26.25 | 106.9 | 4.3 | 4.1 |
| | | | Am-241 | 1.030 | 0.151 | | | 34.4 | 5.0 | |
| | | | Pu-238 | 0.221 | 0.437 | | | 7.4 | 14.6 | |
| Room 303 south wall | 6 | 01N0002-006 001 | Pu-239/240 | 0.016 | 0.126 | 8.78 | 26.25 | 0.2 | 1.5 | 148.7 |
| | | | Am-241 | 0.058 | 0.079 | | | 0.7 | 0.9 | |
| | | | Pu-238 | 0.068 | 0.350 | | | 0.8 | 4.0 | |
| Room 303, south wall | 7 | 01N0002-007 001 | Pu-239/240 | 0.316 | 0.169 | 13.57 | 26.25 | 5.6 | 3.0 | 1.6 |
| | | | Am-241 | 0.068 | 0.092 | | | 1.2 | 1.6 | |
| | | | Pu-238 | 0.107 | 0.378 | | | 1.9 | 6.7 | |
| Room 303, floor | 8 | 01N0002-008 001 | Pu-239/240 | 4.080 | 0.166 | 13.07 | 26.25 | 69.9 | 2.8 | 8.7 |
| | | | Am-241 | 1.010 | 0.095 | | | 17.3 | 1.6 | |
| | | | Pu-238 | 0.084 | 0.328 | | | 1.4 | 5.6 | |
| Room 303, ceiling | 9 | 01N0002-009 001 | Pu-239/240 | -0.021 | 0.148 | 4.78 | 26.25 | -0.1 | 0.9 | 88.6 |
| | | | Am-241 | -0.014 | 0.162 | | | -0.1 | 1.0 | |
| | | | Pu-238 | -0.052 | 0.368 | | | -0.3 | 2.3 | |
| Room 303, ceiling | 10 | 01N0002-010 001 | Pu-239/240 | 0.085 | 0.077 | 3.53 | 26.25 | 0.4 | 0.4 | -0.5 |
| | | | Am-241 | 0.022 | 0.175 | | | 0.1 | 0.8 | |
| | | | Pu-238 | 0.000 | 0.077 | | | 0.0 | 0.4 | |
| Room 303, ceiling | 11 | 01N0002-011 001 | Pu-239/240 | 0.030 | 0.080 | 3.31 | 26.25 | 0.1 | 0.3 | 0.5 |
| | | | Am-241 | -0.017 | 0.199 | | | -0.1 | 0.9 | |
| | | | Pu-238 | -0.012 | 0.141 | | | -0.1 | 0.6 | |
| Room 309, west wall | 12 | 01N0002-012 001 | Pu-239/240 | 0.020 | 0.157 | 5.60 | 26.25 | 0.1 | 1.2 | 0.0 |
| | | | Am-241 | 0.000 | 0.092 | | | 0.0 | 0.7 | |
| | | | Pu-238 | -0.055 | 0.365 | | | -0.4 | 2.7 | |
| | | | | | | | | | -0.3 | |

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Survey Unit 771035 Paint/Solid Media Sample Results

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | TRANSURANIC TOTAL (dpm/100cm ²) DCGL _w =100 |
|----------------------|------------------------|-----------------|------------|--------|-------------|------------|---------------------------------|--|---|--|
| Room 309, south wall | 13 | 01N0002-013 001 | Pu-239/240 | -0.021 | 0.151 | 1.77 | 26.25 | 0.0 | 0.4 | |
| | | | Am-241 | 0.072 | 0.195 | | | 0.2 | 0.5 | |
| | | | Pu-238 | -0.080 | 0.321 | | | -0.2 | 0.7 | |
| Room 309, ceiling | 14 | 01N0002-014 001 | Pu-239/240 | 0.094 | 0.125 | 2.51 | 26.25 | 0.3 | 0.4 | -0.1 |
| | | | Am-241 | 0.032 | 0.254 | | | 0.1 | 0.8 | |
| | | | Pu-238 | -0.021 | 0.424 | | | -0.1 | 1.4 | |
| Room 309, ceiling | 15 | 01N0002-015 001 | Pu-239/240 | -0.006 | 0.180 | 7.67 | 26.25 | -0.1 | 1.8 | 0.3 |
| | | | Am-241 | -0.029 | 0.199 | | | -0.3 | 2.0 | |
| | | | Pu-238 | 0.068 | 0.368 | | | 0.7 | 3.7 | |
| | | | | | | | | | | 0.3 |

| | |
|---------------------|-------|
| MIN | -0.5 |
| MAX | 148.7 |
| MEAN | 17.4 |
| SD | 42.7 |
| DCGL _w = | 100 |

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ATTACHMENT AE

Survey Unit 7710036 Data Summary

Survey Unit 771036 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | PRE | POST |
|---------|------|------|
| MIN | -4.8 | -2.5 |
| MAX | 28.1 | 33.1 |
| MEAN | 8.7 | 14.1 |
| STD DEV | 9.3 | 9.3 |

| | | |
|----------------------------------|-----|-------------------------|
| TRANSURANIC DCGL _w | 100 | 100 |
| | | dpm/100 cm ² |

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

| | PRE | POST |
|---------|------|------|
| MIN | -1.5 | -1.5 |
| MAX | 5.2 | 6.4 |
| MEAN | 0.8 | 1.5 |
| STD DEV | 2.1 | 2.4 |

| | | |
|-------------------------------|----|-------------------------|
| TRANSURANIC DCGL _w | 20 | 20 |
| | | dpm/100 cm ² |

Media Sample Activity

Media Samples

| | |
|-----------------|-----------------|
| 15 | 15 |
| Number Required | Number Obtained |

Total Transuranic Results

| | MIN | MAX | MEAN | STD DEV |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
| | -0.7 | 45.0 | 8.8 | 14.0 |
| | dpm/100 cm ² | dpm/100 cm ² | dpm/100 cm ² | dpm/100 cm ² |

312

Survey Unit 771036 Total Surface Contamination Results

| Pre-Sample Total Surface Activity Survey | | | | | Post-Sample Total Surface Activity Survey | | | | |
|--|---------------|----------------|------------------|----------------------------|---|---------------|----------------|------------------|----------------------------|
| Meter Model: | Instrument #: | Cal. Due Date: | Efficiency (cd): | NE Elects w/ DPs Probe | Meter Model: | Instrument #: | Cal. Due Date: | Efficiency (cd): | NE Elects w/ DPs Probe |
| | 2375 | 1/10/01 | 0.22 | N/A | | 2375 | 1/10/01 | 0.22 | N/A |
| | | | | 2.4 | | | | | 1.9 |
| Total Surface Activity Measurements | | | | | Quality Control Measurements | | | | |
| Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) | Sample Location Number | Serial # | Date | (cpm) | (dpm/100 cm ²) |
| 1 | 2375 | 10/04/00 | 4.7 | 10.3 | 1 | 2375 | 10/04/00 | 6.7 | 21.5 |
| 2 | 2375 | 10/04/00 | 3.3 | 4.1 | 2 | 2375 | 10/04/00 | 5.3 | 15.3 |
| 3 | 2375 | 10/04/00 | 2.7 | 1.4 | 3 | 1803 | 10/05/00 | 5.3 | 15.9 |
| 4 | 2375 | 10/04/00 | 6.7 | 28.1 | 4 | 2375 | 10/04/00 | 7.3 | 24.2 |
| 5 | 2375 | 10/04/00 | 5.3 | 13.0 | 5 | 2375 | 10/04/00 | 6.0 | 18.4 |
| 6 | 2375 | 10/04/00 | 7.3 | 21.9 | 6 | 2375 | 10/04/00 | 4.7 | 12.8 |
| 7 | 2375 | 10/04/00 | 1.3 | 4.8 | 7 | 2375 | 10/04/00 | 4.7 | 12.8 |
| 8 | 2375 | 10/04/00 | 7.3 | 21.9 | 8 | 2375 | 10/04/00 | 3.3 | 6.4 |
| 9 | 2375 | 10/04/00 | 4.7 | 10.3 | 9 | 2375 | 10/04/00 | 1.3 | -2.5 |
| 10 | 2375 | 10/04/00 | 4.7 | 10.3 | 10 | 2375 | 10/04/00 | 9.3 | 33.1 |
| 11 | 2375 | 10/04/00 | 2.7 | 1.4 | 11 | 2375 | 10/04/00 | 4.7 | 12.8 |
| 12 | 2375 | 10/04/00 | 2.3 | -0.4 | 12 | 2375 | 10/04/00 | 3.3 | 6.4 |
| 13 | 2375 | 10/04/00 | 4.0 | 7.2 | 13 | 2375 | 10/04/00 | 7.3 | 24.2 |
| 14 | 2375 | 10/04/00 | 2.7 | 1.4 | 14 | 1803 | 10/05/00 | 2.7 | 3.9 |
| 15 | 2375 | 10/04/00 | 3.3 | 4.1 | 15 | 2375 | 10/04/00 | 3.3 | 6.4 |
| <div>MIN -4.8</div> <div>MAX 28.1</div> <div>MEAN 8.7</div> <div>SD 9.3</div> <div>Transmittance DCC₄₀₀ 100</div> | | | | | <div>MIN -2.5</div> <div>MAX 33.1</div> <div>MEAN 14.1</div> <div>SD 9.3</div> <div>Transmittance DCC₄₀₀ 100</div> | | | | |

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Survey Unit 771036 Removable Surface Activity Results

| Smear Location Number | Pre-Sample Smear Results | | | | | Post-Sample Smear Results | | | | |
|-----------------------|--------------------------|--------------|----------------|-------------|-------------------------------|-------------------------------|--------------|----------------|-------------|----------------------------|
| | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) | Serial Number | Date Counted | Gross (counts) | Gross (cpm) | (dpm/100 cm ²) |
| 1 | 1052 | 10/6/00 | 2.0 | 1.0 | 1.8 | 1052 | 10/6/00 | 3.0 | 1.5 | 3.3 |
| 2 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 |
| 3 | 1354 | 10/6/00 | 0.0 | 0.0 | -0.9 | 1354 | 10/6/00 | 0.0 | 0.0 | -0.9 |
| 4 | 1052 | 10/6/00 | 2.0 | 1.0 | 1.8 | 1052 | 10/6/00 | 1.0 | 0.5 | 0.3 |
| 5 | 1351 | 10/6/00 | 0.0 | 0.0 | -1.5 | 1351 | 10/6/00 | 2.0 | 1.0 | 1.5 |
| 6 | 1354 | 10/6/00 | 3.0 | 1.5 | 3.6 | 1354 | 10/6/00 | 4.0 | 2.0 | 5.2 |
| 7 | 1052 | 10/6/00 | 1.0 | 0.5 | 0.3 | 1052 | 10/6/00 | 2.0 | 1.0 | 1.8 |
| 8 | 1351 | 10/6/00 | 0.0 | 0.0 | -1.5 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 |
| 9 | 1354 | 10/6/00 | 3.0 | 1.5 | 3.6 | 1354 | 10/6/00 | 2.0 | 1.0 | 2.1 |
| 10 | 1052 | 10/6/00 | 0.0 | 0.0 | -1.2 | 1052 | 10/6/00 | 5.0 | 2.5 | 6.4 |
| 11 | 1351 | 10/6/00 | 1.0 | 0.5 | 0.0 | 1351 | 10/6/00 | 0.0 | 0.0 | -1.5 |
| 12 | 1354 | 10/6/00 | 4.0 | 2.0 | 5.2 | 1354 | 10/6/00 | 3.0 | 1.5 | 3.6 |
| 13 | 1052 | 10/6/00 | 0.0 | 0.0 | -1.2 | 1052 | 10/6/00 | 1.0 | 0.5 | 0.3 |
| 14 | 1351 | 10/6/00 | 2.0 | 1.0 | 1.5 | 1351 | 10/6/00 | 0.0 | 0.0 | -1.5 |
| 15 | 1354 | 10/6/00 | 1.0 | 0.5 | 0.6 | 1354 | 10/6/00 | 2.0 | 1.0 | 2.1 |
| | | | | | MIN | MIN | | | | |
| | | | | | MAX | MAX | | | | |
| | | | | | MEAN | MEAN | | | | |
| | | | | | SD | SD | | | | |
| | | | | | Transuranic DCG _{LW} | Transuranic DCG _{LW} | | | | |
| | | | | | 20 | 20 | | | | |

Post Available Copy

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Survey Unit 771036 Paint/Solid Media Sample Results

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | TRANSURANIC TOTAL (dpm/100cm ²) DCGL _w =100 |
|----------------------|------------------------|-----------------|------------|--------|-------------|------------|---------------------------------|--|---|--|
| Room 301, ceiling | 1 | 01N0003-001 001 | Pu-239/240 | 0.050 | 0.176 | 3.38 | 26.25 | 0.2 | 0.8 | |
| | | | Am-241 | -0.015 | 0.175 | | | -0.1 | 0.8 | |
| | | | Pu-238 | 0.190 | 0.409 | | | 0.8 | 1.8 | 1.0 |
| Room 301, ceiling | 2 | 01N0003-002 001 | Pu-239/240 | 0.066 | 0.188 | 2.03 | 26.25 | 0.2 | 0.5 | |
| | | | Am-241 | 0.029 | 0.078 | | | 0.1 | 0.2 | |
| | | | Pu-238 | 0.030 | 0.358 | | | 0.1 | 1.0 | 0.3 |
| Airlock, west wall | 3 | 01N0003-003 001 | Pu-239/240 | 0.274 | 0.137 | 3.41 | 26.25 | 1.2 | 0.6 | |
| | | | Am-241 | 0.052 | 0.140 | | | 0.2 | 0.6 | |
| | | | Pu-238 | -0.023 | 0.462 | | | -0.1 | 2.1 | 1.4 |
| Room 301, floor | 4 | 01N0003-004 001 | Pu-239/240 | 0.920 | 0.187 | 5.96 | 26.25 | 7.2 | 1.5 | |
| | | | Am-241 | 2.120 | 0.165 | | | 16.6 | 1.3 | |
| | | | Pu-238 | 0.190 | 0.382 | | | 1.5 | 3.0 | 25.2 |
| Room 301, north wall | 5 | 01N0003-005 001 | Pu-239/240 | 0.043 | 0.129 | 11.42 | 26.25 | 0.6 | 1.9 | |
| | | | Am-241 | 0.091 | 0.167 | | | 1.4 | 2.5 | |
| | | | Pu-238 | -0.183 | 0.435 | | | -2.7 | 6.5 | -0.7 |
| Room 301, north wall | 6 | 01N0003-006 001 | Pu-239/240 | 0.212 | 0.133 | 9.87 | 26.25 | 2.7 | 1.7 | |
| | | | Am-241 | 0.114 | 0.104 | | | 1.5 | 1.3 | |
| | | | Pu-238 | 0.128 | 0.371 | | | 1.7 | 4.8 | 5.9 |
| Room 301, south wall | 7 | 01N0003-007 001 | Pu-239/240 | 0.032 | 0.151 | 5.85 | 26.25 | 0.2 | 1.2 | |
| | | | Am-241 | 0.080 | 0.082 | | | 0.6 | 0.6 | |
| | | | Pu-238 | 0.027 | 0.378 | | | 0.2 | 2.9 | 1.1 |
| Room 301, west wall | 8 | 01N0003-008 001 | Pu-239/240 | 0.325 | 0.210 | 16.13 | 26.25 | 6.9 | 4.4 | |
| | | | Am-241 | 0.077 | 0.104 | | | 1.6 | 2.2 | |
| | | | Pu-238 | 0.073 | 0.414 | | | 1.5 | 8.8 | 10.0 |
| Hallway, ceiling | 9 | 01N0003-009 001 | Pu-239/240 | 0.031 | 0.144 | 2.17 | 26.25 | 0.1 | 0.4 | |
| | | | Am-241 | 0.031 | 0.084 | | | 0.1 | 0.2 | |
| | | | Pu-238 | 0.153 | 0.360 | | | 0.4 | 1.0 | 0.6 |
| Room 304, west wall | 10 | 01N0003-010 001 | Pu-239/240 | 0.436 | 0.154 | 7.60 | 26.25 | 4.3 | 1.5 | |
| | | | Am-241 | 0.000 | 0.089 | | | 0.0 | 0.9 | |
| | | | Pu-238 | 0.156 | 0.340 | | | 1.6 | 3.4 | 5.9 |
| Room 304, north wall | 11 | 01N0003-011 001 | Pu-239/240 | 0.204 | 0.175 | 17.56 | 26.25 | 4.7 | 4.0 | |
| | | | Am-241 | 0.189 | 0.114 | | | 4.4 | 2.6 | |
| | | | Pu-238 | -0.212 | 0.591 | | | -4.9 | 13.6 | 4.2 |
| Room 304, floor | 12 | 01N0003-012 001 | Pu-239/240 | 4.840 | 0.142 | 5.86 | 26.25 | 37.2 | 1.1 | |
| | | | Am-241 | 0.829 | 0.094 | | | 6.4 | 0.7 | |
| | | | Pu-238 | 0.195 | 0.394 | | | 1.5 | 3.0 | 45.0 |

Survey Unit 771036 Paint/Solid Media Sample Results

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (m ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | TRANSURANIC TOTAL (dpm/100cm ²) DCGL _W =100 |
|----------------------|------------------------|-----------------|------------|--------|-------------|------------|--------------------------------|--|---|---|
| Room 304, south wall | 13 | 01N0003-013 001 | Pu-239/240 | 2.140 | 0.181 | 9.37 | 26.25 | 26.3 | 2.2 | |
| | | | Am-241 | 0.524 | 0.083 | | | 6.4 | 1.0 | |
| | | | Pu-238 | -0.029 | 0.404 | | | -0.4 | 5.0 | |
| Room 304, ceiling | 14 | 01N0003-014 001 | Pu-239/240 | -0.005 | 0.155 | 2.98 | 26.25 | 0.0 | 0.6 | 32.4 |
| | | | Am-241 | 0.000 | 0.089 | | | 0.0 | 0.3 | |
| | | | Pu-238 | 0.054 | 0.306 | | | 0.2 | 1.2 | |
| Room 301, floor | 15 | 01N0003-015 001 | Pu-239/240 | 0.058 | 0.149 | 3.93 | 26.25 | 0.3 | 0.8 | 0.2 |
| | | | Am-241 | -0.017 | 0.208 | | | -0.1 | 1.1 | |
| | | | Pu-238 | -0.132 | 0.379 | | | -0.7 | 2.0 | |

| | |
|---------------------|------|
| MIN | -0.7 |
| MAX | 45.0 |
| MEAN | 8.8 |
| SD | 14.0 |
| DCGL _W = | 100 |

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ATTACHMENT AF

Survey Unit 7710037 Data Summary

Survey Unit 771037 Data Summary

Total Surface Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 17 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | | |
|----------------------------------|-----|-------------------------|
| TRANSURANIC DCGL _w | 100 | dpm/100 cm ² |
|----------------------------------|-----|-------------------------|

Removable Activity Measurements

| | |
|-----------------|-----------------|
| 15 | 17 |
| Number Required | Number Obtained |

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | | |
|----------------------------------|----|-------------------------|
| TRANSURANIC DCGL _w | 20 | dpm/100 cm ² |
|----------------------------------|----|-------------------------|

Media Sample Activity

| | |
|-----------------|-----------------|
| 15 | 17 |
| Number Required | Number Obtained |

Total Transuranic Results

| | |
|---------|-------------------------|
| MIN | dpm/100 cm ² |
| MAX | dpm/100 cm ² |
| MEAN | dpm/100 cm ² |
| STD DEV | dpm/100 cm ² |

| | | |
|-------------------|-----|-------------------------|
| DCGL _w | 100 | dpm/100 cm ² |
|-------------------|-----|-------------------------|

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Survey Unit 771037 Total Surface Contamination Results

| Total Surface Activity Survey | | | | Quality Control Survey | | | | | | |
|-------------------------------------|-------------------------|----------|-------|----------------------------------|----------------------------|----------|----------|-------|--------------------------------|----------------------------|
| Model Model: | NE Electra w/ DPA Probe | | | NE Electra w/ DPA Probe | | | | | | |
| Instrument #: | 2383 | 1286 | N/A | 2383 | | 1286 | N/A | | | |
| Cal. Date Date: | 7/17/00 | 9/29/00 | N/A | 7/17/00 | | 9/29/00 | N/A | | | |
| Efficiency (c/d): | 0.220 | 0.200 | N/A | 0.220 | | 0.200 | N/A | | | |
| Total Surface Activity Measurements | | | | Quality Control Measurements | | | | | | |
| Sample Location Number | Serial # | Date | (cpm) | MDA (dpm/100 cm ²) | (dpm/100 cm ²) | Serial # | Date | (cpm) | MDA (dpm/100 cm ²) | (dpm/100 cm ²) |
| 1 | 2383 | 05/30/00 | 29.3 | 47 | 109.7 | 1286 | 05/30/00 | 27.3 | 45 | 103.9 |
| 2 | 1286 | 05/30/00 | 8.0 | 47 | 3.8 | | | | | |
| 3 | 2383 | 05/30/00 | 34.0 | 47 | 131.1 | | | | | |
| 4 | 1286 | 05/30/00 | 18.0 | 47 | 59.4 | | | | | |
| 5 | 2383 | 05/30/00 | 18.0 | 47 | 59.4 | | | | | |
| 6 | 1286 | 05/30/00 | 14.7 | 47 | 43.4 | | | | | |
| 7 | 2383 | 05/30/00 | 13.3 | 47 | 37.0 | | | | | |
| 8 | 1286 | 05/30/00 | 13.3 | 47 | 37.0 | | | | | |
| 9 | 2383 | 05/30/00 | 10.7 | 47 | 25.2 | | | | | |
| 10 | 1286 | 05/30/00 | 24.0 | 47 | 85.6 | | | | | |
| 11 | 2383 | 05/30/00 | 14.0 | 47 | 40.2 | | | | | |
| 12 | 1286 | 05/30/00 | 8.0 | 47 | 3.8 | | | | | |
| 13 | 2383 | 05/30/00 | 18.7 | 47 | 61.6 | | | | | |
| 14 | 1286 | 05/30/00 | 38.7 | 47 | 152.5 | | | | | |
| 15 | 2383 | 05/30/00 | 19.3 | 47 | 64.3 | | | | | |
| 16 | 1286 | 05/30/00 | 18.0 | 47 | 59.4 | | | | | |
| 17 | 2383 | 05/30/00 | 7.3 | 47 | 9.7 | | | | | |
| | | | | MIN | 3.8 | | | | | |
| | | | | MAX | 152.5 | | | | | |
| | | | | MEAN | 57.7 | | | | | |
| | | | | SD | 42.2 | | | | | |
| | | | | Transmittance DOGL ₄₀ | 100 | | | | | |

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Survey Unit 771037 Smear Results

| Smear Location Number | Smear Results | | | | |
|-----------------------|---------------|--------------|-------------------------------|----------------------------|-----|
| | Serial Number | Date Counted | Gross (cpm) | (dpm/100 cm ²) | MDA |
| 1 | 1053 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 2 | 1351 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 3 | 888 | 5/30/00 | 0.5 | 0.6 | 8.3 |
| 4 | 1201 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 5 | 1053 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 6 | 1351 | 5/30/00 | 0.5 | 0.6 | 8.3 |
| 7 | 888 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 8 | 1201 | 5/30/00 | 0.5 | 0.6 | 8.3 |
| 9 | 1053 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 10 | 1351 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 11 | 888 | 5/30/00 | 0.5 | 0.6 | 8.3 |
| 12 | 1201 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 13 | 1053 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 14 | 1351 | 5/30/00 | 0.5 | 0.6 | 8.3 |
| 15 | 888 | 5/30/00 | 0.5 | 0.6 | 8.3 |
| 16 | 1201 | 5/30/00 | 0.0 | -0.9 | 8.3 |
| 17 | 1053 | 5/30/00 | 0.5 | 0.6 | 8.3 |
| | | | MIN | -0.9 | |
| | | | MAX | 0.6 | |
| | | | MEAN | -0.3 | |
| | | | SD | 0.8 | |
| | | | Transuranic DCG _{LW} | 20 | |

771037 Stack Paint/Solid Media Sample Results

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | Transuranic TOTAL (dpm/100cm ²) |
|----------------------|------------------------|----------------|------------|--------|-------------|------------|---------------------------------|--|---|---|
| Floor | 1 | 001 001 | Pu-238 | 0.281 | 0.373 | 153.39 | 16 | 92.7 | 123.0 | |
| | | | Pu-239/240 | 14.600 | 0.174 | | | 4816.3 | 57.4 | |
| | | | Am-241 | 4.010 | 0.288 | | | 1322.8 | 95.0 | |
| Floor | 2 | 002 001 | Pu-238 | 0.258 | 0.346 | 115.45 | 16 | 64.1 | 85.9 | 6231.8 |
| | | | Pu-239/240 | 13.400 | 0.203 | | | 3327.1 | 50.4 | |
| | | | Am-241 | 3.650 | 0.331 | | | 906.3 | 82.2 | |
| Floor | 3 | 003 001 | Pu-238 | 0.110 | 0.424 | 87.13 | 16 | 20.6 | 79.5 | 4297.4 |
| | | | Pu-239/240 | 0.225 | 0.182 | | | 42.2 | 34.1 | |
| | | | Am-241 | 2.100 | 0.344 | | | 393.5 | 64.5 | |
| Floor | 4 | 004 001 | Pu-238 | -0.164 | 0.525 | 58.44 | 16 | -20.6 | 66.0 | 456.3 |
| | | | Pu-239/240 | 0.328 | 0.164 | | | 41.2 | 20.6 | |
| | | | Am-241 | 0.652 | 0.347 | | | 81.9 | 43.6 | |
| ~ 7 ft | 5 | 005 001 | Pu-238 | 0.107 | 0.440 | 105.95 | 16 | 24.4 | 100.3 | 102.6 |
| | | | Pu-239/240 | 0.228 | 0.179 | | | 52.0 | 40.8 | |
| | | | Am-241 | 0.357 | 0.262 | | | 81.3 | 59.7 | |
| ~ 7 ft | 6 | 006 001 | Pu-238 | 0.120 | 0.289 | 74.69 | 16 | 19.3 | 46.4 | 157.7 |
| | | | Pu-239/240 | 0.149 | 0.136 | | | 23.9 | 21.8 | |
| | | | Am-241 | -0.056 | 0.244 | | | -9.0 | 39.2 | |
| ~ 7 ft | 7 | 007 001 | Pu-238 | -0.024 | 0.397 | 92.46 | 16 | -4.8 | 78.9 | 34.2 |
| | | | Pu-239/240 | 0.129 | 0.202 | | | 25.7 | 40.2 | |
| | | | Am-241 | 0.335 | 0.246 | | | 66.6 | 48.9 | |
| ~ 7 ft | 8 | 008 001 | Pu-238 | -0.106 | 0.379 | 76.50 | 16 | -17.4 | 62.4 | 87.5 |
| | | | Pu-239/240 | 0.006 | 0.242 | | | 1.0 | 39.8 | |
| | | | Am-241 | -0.074 | 0.260 | | | -12.2 | 42.8 | |
| ~ 7 ft | 9 | 009 001 | Pu-238 | -0.130 | 0.425 | 75.93 | 16 | -21.2 | 69.4 | -28.6 |
| | | | Pu-239/240 | 0.058 | 0.205 | | | 9.5 | 33.5 | |
| | | | Am-241 | 0.184 | 0.256 | | | 30.0 | 41.8 | |
| ~ 7 ft | 10 | 010 001 | Pu-238 | -0.007 | 0.496 | 85.99 | 16 | -1.3 | 91.7 | 18.3 |
| | | | Pu-239/240 | 0.218 | 0.098 | | | 40.3 | 18.1 | |
| | | | Am-241 | 0.129 | 0.345 | | | 23.9 | 63.8 | |

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771037 Stack Paint/Solid Media Sample Results

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (m ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | Transuranic TOTAL (dpm/100cm ²) |
|----------------------|------------------------|----------------|------------|--------|-------------|------------|--------------------------------|--|---|---|
| Base | 11 | 011 001 | Pu-238 | 0.627 | 0.094 | 103.00 | 40 | 55.6 | 8.3 | |
| | | | Pu-239/240 | 51.100 | 0.199 | | | 4527.7 | 17.6 | |
| | | | Am-241 | 11.000 | 0.260 | | | 974.7 | 23.0 | |
| Base | 12 | 012 001 | Pu-238 | 0.083 | 0.152 | 88.55 | 40 | 6.3 | 11.6 | 5558.0 |
| | | | Pu-239/240 | 2.630 | 0.152 | | | 200.3 | 11.6 | |
| | | | Am-241 | 1.870 | 0.158 | | | 142.4 | 12.0 | |
| Base | 13 | 013 001 | Pu-238 | 0.111 | 0.100 | 97.15 | 40 | 9.3 | 8.4 | 349.1 |
| | | | Pu-239/240 | 3.350 | 0.177 | | | 280.0 | 14.8 | |
| | | | Am-241 | 1.490 | 0.101 | | | 124.5 | 8.4 | |
| Base | 14 | 014 001 | Pu-238 | 0.148 | 0.100 | 102.38 | 40 | 13.0 | 8.8 | 413.8 |
| | | | Pu-239/240 | 8.680 | 0.100 | | | 764.5 | 8.8 | |
| | | | Am-241 | 2.390 | 0.090 | | | 210.5 | 7.9 | |
| Base | 15 | 015 001 | Pu-238 | 0.350 | 0.190 | 91.57 | 40 | 27.6 | 15.0 | 988.0 |
| | | | Pu-239/240 | 7.140 | 0.190 | | | 562.4 | 15.0 | |
| | | | Am-241 | 3.840 | 0.101 | | | 302.5 | 8.0 | |
| Base | 16 | 016 001 | Pu-238 | 0.000 | 0.088 | 95.90 | 40 | 0.0 | 7.3 | 892.5 |
| | | | Pu-239/240 | 1.050 | 0.155 | | | 86.6 | 12.8 | |
| | | | Am-241 | 0.750 | 0.113 | | | 61.9 | 9.3 | |
| Base | 17 | 017 001 | Pu-238 | 0.000 | 0.088 | 96.80 | 40 | 0.0 | 7.3 | 148.5 |
| | | | Pu-239/240 | 2.290 | 0.088 | | | 190.7 | 7.3 | |
| | | | Am-241 | 3.290 | 0.114 | | | 274.0 | 9.5 | |

| | |
|---------------------|--------|
| MIN | -28.6 |
| MAX | 6231.8 |
| MEAN | 1190.3 |
| SD | 2041.3 |
| DCGL _w = | 100 |

Survey Unit 771037 Core Sample Data Summary

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID RIN 00N0085 | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | Transuranic TOTAL (dpm/100cm ²) | Values Corrected for Results < MDC (dpm/100 cm ²) |
|------------------------------|------------------------|-------------------------------|------------|--------|-------------|------------|---------------------------------|--|---|---|---|
| Base West - Interior 0 25" | 1 | 001 001 | Pu-238 | -0 090 | 0 411 | 65 67 | 7 | -29 1 | 132 7 | | |
| | | | Pu-239/240 | 0 303 | 0 177 | | | 97 8 | 57 1 | | |
| | | | Am-241 | 1 290 | 0 097 | | | 416 4 | 31 3 | 485.2 | 514.2 |
| Base West - 0 25 to 0 5" | 2 | 002 001 | Pu-238 | -0 120 | 0 307 | 84 23 | 7 | -49 7 | 127 1 | | |
| | | | Pu-239/240 | 0 031 | 0 144 | | | 12 8 | 59 6 | | |
| | | | Am-241 | 0 045 | 0 136 | | | 18 6 | 56 3 | -18.2 | 0.0 |
| Base West - 0 5 to 0 75" | 3 | 003 001 | Pu-238 | -0 023 | 0 456 | 94 17 | 7 | -10 6 | 211 1 | | |
| | | | Pu-239/240 | 0 011 | 0 136 | | | -5 1 | 63 0 | | |
| | | | Am-241 | 0 018 | 0 143 | | | 8 3 | 66 2 | -7.4 | 0.0 |
| Base West - 0 75 to 1" | 4 | 004 001 | Pu-238 | 0 113 | 0 331 | 57 50 | 7 | 31 9 | 93 6 | | |
| | | | Pu-239/240 | -0 031 | 0 162 | | | -8 8 | 45 8 | | |
| | | | Am-241 | 0 000 | 0 079 | | | 0 0 | 22 3 | 23.2 | 0.0 |
| Base East - Interior 0 25" | 5 | 005 001 | Pu-238 | -0 078 | 0 448 | 45 57 | 7 | -17 5 | 100 4 | | |
| | | | Pu-239/240 | 0 791 | 0 132 | | | 177 2 | 29 6 | | |
| | | | Am-241 | 0 710 | 0 133 | | | 159 0 | 29 8 | 318.8 | 336.2 |
| Base East - 0 25 to 0 5" | 6 | 006 001 | Pu-238 | 0 064 | 0 329 | 67 95 | 7 | 21 4 | 109 9 | | |
| | | | Pu-239/240 | 0 089 | 0 118 | | | 29 7 | 39 4 | | |
| | | | Am-241 | 0 017 | 0 134 | | | 5 7 | 44 8 | 56 8 | 0.0 |
| Base East - 0 5 to 0 75" | 7 | 007 001 | Pu-238 | 0 091 | 0 427 | 77 50 | 7 | 34 7 | 162 7 | | |
| | | | Pu-239/240 | 0 036 | 0 171 | | | 13 7 | 65 1 | | |
| | | | Am-241 | 0 000 | 0 110 | | | 0 0 | 41 9 | 48.4 | 0.0 |
| Base East - 0 75 to 1" | 8 | 008 001 | Pu-238 | 0 136 | 0 326 | 54 83 | 7 | 36 7 | 87 9 | | |
| | | | Pu-239/240 | -0 031 | 0 165 | | | -8 4 | 44 5 | | |
| | | | Am-241 | 0 030 | 0 082 | | | 8 1 | 22 1 | 36 4 | 0.0 |
| 15-18' East - Interior 0 25" | 9 | 009 001 | Pu-238 | -0 053 | 0 687 | 80 97 | 7 | -21 1 | 273 4 | | |
| | | | Pu-239/240 | 0 282 | 0 231 | | | 112 2 | 91 9 | | |
| | | | Am-241 | 0 047 | 0 139 | | | 18 7 | 55 3 | 109.9 | 112.2 |
| 15-18' East - 0 25 to 0 5" | 10 | 010 001 | Pu-238 | 0 329 | 0 393 | 83 74 | 7 | 135 4 | 161 8 | | |
| | | | Pu-239/240 | 0 024 | 0 189 | | | 9 9 | 77 8 | | |
| | | | Am-241 | 0 019 | 0 155 | | | 7 8 | 63 8 | | |
| 15-18' - 0 5 to 0 75" | 11 | 011 001 | Pu-238 | 0 093 | 0 358 | 86 39 | 7 | 39 5 | 152 0 | | |
| | | | Pu-239/240 | -0 029 | 0 154 | | | -12 3 | 65 4 | | |
| | | | Am-241 | -0 012 | 0 143 | | | -5 1 | 60 7 | 22.1 | 0.0 |
| 15-18' East - 0 75 to 1" | 12 | 012 001 | Pu-238 | 0 024 | 0 283 | 114 25 | 7 | 13 5 | 158 9 | | |
| | | | Pu-239/240 | 0 028 | 0 133 | | | 15 7 | 74 7 | | |
| | | | Am-241 | 0 017 | 0 132 | | | 9 5 | 74 1 | 38.8 | 0.0 |

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Survey Unit 771037 Core Sample Data Summary

| LOCATION DESCRIPTION | SAMPLE LOCATION NUMBER | SITE SAMPLE ID RUN | NUCLIDE | pCi/g | MDA (pCi/g) | WEIGHT (g) | SURFACE AREA (in ²) | INDIVIDUAL NUCLIDE (dpm/100cm ²) | ESTIMATED MDA (dpm/100cm ²) | Transuranic TOTAL (dpm/100cm ²) | Values Corrected for Results < MDC (dpm/100 cm ²) |
|------------------------------|------------------------|--------------------|------------|--------|-------------|------------|---------------------------------|--|---|---|---|
| 15-18' West - Interior 0.25" | 13 | 013 001 | Pu-238 | 0.113 | 0.436 | 59.37 | 7 | 33.0 | 127.2 | | |
| | | | Pu-239/240 | 0.097 | 0.129 | | | 28.3 | 37.6 | | |
| | | | Am-241 | 0.088 | 0.080 | | | 25.7 | 23.3 | | |
| 15-18' West - 0.25 to 0.5" | 14 | 014 001 | Pu-238 | 0.088 | 0.335 | 57.88 | 7 | 25.0 | 95.3 | | 0.0 |
| | | | Pu-239/240 | -0.005 | 0.164 | | | -1.4 | 46.7 | | |
| | | | Am-241 | -0.012 | 0.147 | | | -3.4 | 41.8 | 20.2 | 0.0 |
| 15-18' West - 0.5 to 0.75" | 15 | 015 001 | Pu-238 | -0.020 | 0.404 | 105.40 | 7 | -10.4 | 209.3 | | |
| | | | Pu-239/240 | 0.040 | 0.119 | | | 20.7 | 61.7 | | |
| | | | Am-241 | 0.021 | 0.164 | | | 10.9 | 85.0 | 21.2 | 0.0 |
| 15-18' West - 0.75 to 1" | 16 | 016 001 | Pu-238 | 0.249 | 0.313 | 77.13 | 7 | 94.4 | 118.7 | | |
| | | | Pu-239/240 | 0.014 | 0.113 | | | 5.3 | 42.8 | | |
| | | | Am-241 | 0.000 | 0.104 | | | 0.0 | 39.4 | 99.7 | 0.0 |
| 24' East - Interior 0.5" | 17 | 017 001 | Pu-238 | 0.127 | 0.358 | 141.65 | 7 | 88.4 | 249.3 | | |
| | | | Pu-239/240 | 0.106 | 0.143 | | | 73.8 | 99.6 | | |
| | | | Am-241 | 0.066 | 0.090 | | | 46.0 | 62.7 | 208.2 | 0.0 |
| 24' East - 0.5 to 1" | 18 | 018 001 | Pu-238 | 0.090 | 0.351 | 124.64 | 7 | 55.1 | 215.1 | | |
| | | | Pu-239/240 | -0.034 | 0.178 | | | -20.8 | 109.1 | | |
| | | | Am-241 | -0.011 | 0.136 | | | -6.7 | 83.3 | 27.6 | 0.0 |
| 24' West - Interior 0.5" | 19 | 019 001 | Pu-238 | -0.073 | 0.345 | 110.08 | 7 | -39.5 | 240.2 | | |
| | | | Pu-239/240 | 0.567 | 0.138 | | | 306.8 | 96.1 | | |
| | | | Am-241 | 0.352 | 0.134 | | | 190.5 | 93.3 | 497.3 | |
| 24' West - 0.5 to 1" | 20 | 020 001 | Pu-238 | 0.082 | 0.358 | 134.27 | 7 | 54.1 | 236.3 | | |
| | | | Pu-239/240 | 0.022 | 0.172 | | | 14.5 | 113.5 | | |
| | | | Am-241 | 0.035 | 0.094 | | | 23.1 | 62.0 | 91.7 | 0.0 |
| | | | | | | | | | MIN | -18.2 | 0.0 |
| | | | | | | | | | MAX | 485.2 | 514.2 |
| | | | | | | | | | MEAN | 114.0 | 73.0 |
| | | | | | | | | | SD | 145.6 | 167.1 |
| | | | | | | | | | DCGL _w = | 100 | 100 |

Note shaded values indicate exceedances that are due to relatively high mass values, not high transuranic values

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